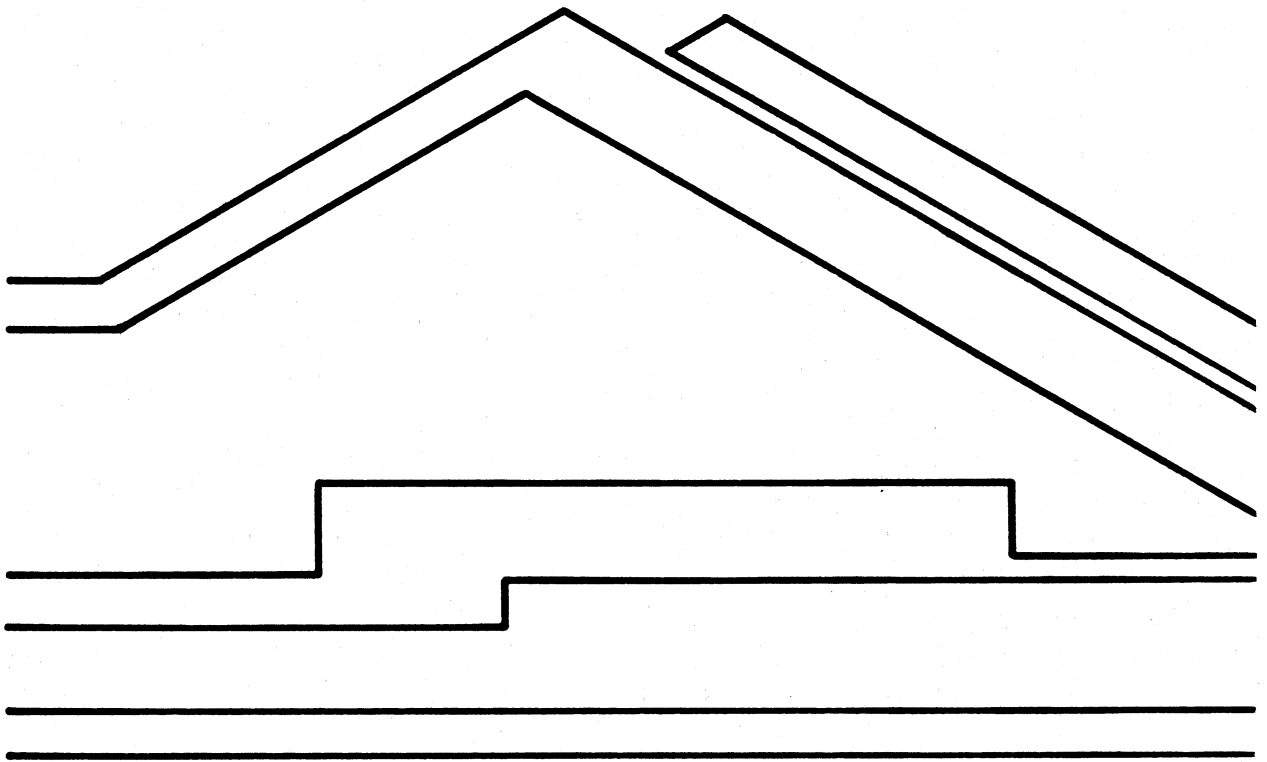


Regional Plan for the Lake Tahoe Basin

Design Review Guidelines



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DESIGN REVIEW GUIDELINES

Tahoe Regional Planning Agency

Adopted September 27, 1989

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INTRODUCTORY SECTIONS

PURPOSE

The scenic beauty of the Lake Tahoe Region has been recognized as a national treasure through many eyes, including those of the U.S. Congress. The visual quality of the natural landscape is the primary contributor. National treasure status has afforded the Region unparalleled stewardship of its' resources in the form of environmental threshold carrying capacities. The concept of stewardship carries through to the design and development of the built environment. In order to remain a national treasure the visual quality of the built environment and the way it fits into the natural setting becomes critical. This manual represents a concerted effort of citizens, design professionals, business representatives and planners to keep this area a national treasure while accommodating the sensitive development and use of land.

In order to maintain and improve the overall quality of the built environment in the Lake Tahoe Region, TRPA has adopted minimum design standards. The Design Review Guidelines manual contains a collection of design and site planning methods which may be used during project development to meet the design standards. Property owners and project applicants should be aware that both the standards and guidelines will be considered by TRPA's Project Review Division during Project Review.

As an area dependent on the tourism industry, the appearance and aesthetic features of the communities in the Region take on an economic importance. These design standards and guidelines are intended to create and maintain community settings that are visually attractive to both visitors and residents.

It is anticipated that the implementation of design standards and guidelines will play a major role in attaining TRPA's Scenic Resource Thresholds throughout the Region. At the very least, projects which are built that meet the design standards will not degrade scenic resources. Over time as more and more projects are developed and redeveloped in accordance with these standards and guidelines, all roadway and shoreline travel routes used in assessing the quality of scenic resources, should meet the scenic thresholds.

HOW TO USE THIS MANUAL

Introductory Sections

An important goal of this manual is to present positive solutions to design problems which designers must address in the Region. It is strongly recommended that everyone read the introductory sections of this document. These sections discuss the philosophy behind the guidelines as well as their legal standing and authority.

An important concept behind this manual is the existence of three different visual environments throughout the Region. The three environments are: urban areas, rural transition areas, and rural areas. The characteristics of each environment are identified, and the design implications discussed beginning on page **vi**.

An important section which should be reviewed is the ALTERNATIVES TO THE DESIGN REVIEW GUIDELINES. It identifies situations where project applicants may substitute design guidelines in place of guidelines listed in this document, and outlines a basic appeal procedure.

Design Guidelines Sections

The design guidelines provided in this manual are organized by subject (design element). See the Table of Contents. Each set of guidelines provided relates to a particular standard or rule in the Code of Ordinances. Specific chapter and section references are provided with each standard listed in order that interested persons may easily locate a particular standard in the Code. The example on page **iv** shows the typical format found throughout this document.

Applicants with new projects on undeveloped land or those whose project is a major remodel or expansion should review the entire document. Project review application submittals and review processes differ depending on the type of project. For exact requirements please consult the individual application packets available at TRPA's front counter.

Applicants whose projects involve only a single element listed in the Table of Contents should review the introductory materials and then the design element in question. Please call the TRPA offices if you have questions or suggestions regarding this document.

This manual contains both standards and guidelines. It does not create new standards, it only repeats existing, adopted standards from TRPA's Code. It is important to understand the difference between standards and guidelines:

Standard: Standards are *rules* adopted in the Code of Ordinances which must be met. This manual contains only standards which have previously been adopted. It does not create new standards which are not part of the Code. Standards which apply to a project will be uniformly applied in all cases. In this way, standards supercede guidelines. In some cases such as maximum building height or land coverage, the Code is used to determine a specific amount to which you are entitled. The Design Review Guidelines will not override or otherwise reduce that amount established by applying the Code standards.

Guideline: Guidelines are not rules, they are *suggestions* as to how to meet a required standard. They are not additional standards, and will not be applied as standards. More latitude and flexibility exists when dealing with guidelines than with standards. TRPA shall consider the guidelines recommended herein and any suggestions provided by the applicant in the review and approval of a project.

The legal authority to invoke the design standards and guidelines is established in Chapter 30, Design Standards, or TRPA's Code of Ordinances, and states the following:

- 30.1 Applicability: *All projects shall comply with the standards set forth in this chapter, except as noted below. In addition, exempt activities, as defined in Chapter 4, shall comply with sections 30.6, 30.9 and 30.10. Substitute design standards shall not apply to the review procedures and standards for projects in the shoreland.[§] Appropriate provisions of the Design Review Guidelines and Scenic Quality Improvement Program may be considered as conditions of project approval.*
- 30.2 Design Review Guidelines: *Design and site planning methods and techniques shall be set forth in a handbook called Design Review Guidelines, except that design review guidelines for the Meyers Community Plan are set forth in the adopted community plan.*

Appeals

TRPA shall establish an appeal procedure for project applicants who disagree with the guidelines that have been imposed as conditions of project approval by staff. Please contact TRPA if you wish to appeal a specific imposition of a guideline. The Rules of Procedure specify the deadlines and appeal procedures.

[§] Amended 11/20/02

ALTERNATIVES TO THE DESIGN REVIEW GUIDELINES

Design review is an integral component of project review. The Project Review Division will review your application according to the process outlined in each project application packet. These packets are available at the TRPA office or may be requested by mail.

The Project Review Division will review your project to see that all of the design standards applicable to your project listed in Chapter 30 are met.

Alternatives

In the following situations TRPA may allow the substitution of design guidelines from those listed in this manual:

1. When an applicant proposes a design solution (guideline) which, in the opinion of TRPA, meets a design standard in a manner which is equal or superior to a guideline identified in this document;
2. When TRPA has approved the use of substitute design standards or design review guidelines in the local jurisdiction in which the project is located. The substitute standards or guidelines must be established by the local government. This opportunity is provided for in Chapter 30 of the Code of Ordinances.

30.4 Substitution Of Standards And Guidelines: *Equal or superior standards and guidelines may be substituted as set forth below:*

30.4.A Standards: *Equal or superior design standards may be adopted by TRPA pursuant to a community plan, re development plan, specific plan or master plan.*

30.4.B Guidelines: *Local governments may adopt guidelines consistent with the TRPA Design Review Guidelines and Scenic Quality Improvement Program. TRPA, upon finding the local guidelines are equal or superior to the TRPA guidelines and program, may adopt the local guidelines for application in that jurisdiction.*

TRPA will maintain copies of substitute design standards or guidelines adopted for use in local jurisdictions. Projects within those jurisdictions will be reviewed using the substitute regulations.

TYPICAL FORMAT FOR DESIGN GUIDELINES SECTIONS

CODE REFERENCE

Standard: 30.5.B

ADOPTED STANDARD
WHICH MUST BE MET

(4) Screening of service yards, maintenance yards, warehousing, outdoor storage and trash and refuse collection areas shall be accomplished by the use of walls, fencing, landscape plantings or combinations thereof. Screening shall be effective in both winter and summer

(5) Service yards, maintenance yards, warehousing, and outdoor storage areas shall be located in areas which are not highly visible from major transportation corridors, scenic turnouts, public recreation areas or the waters of lakes in the Region.

METHODS AVAILABLE
TO MEET STANDARD

(1) **Mechanical Equipment.** Site design should consider the placement and screening of service areas and auxiliary structures. This includes service yards, maintenance areas, outdoor storage, fuel tanks, trash and refuse collection or disposal, and other utility meters and hardware.

Utility meters and service functions should not be visible on the primary facades of buildings or in front yard areas.

(2) **Auxiliary Structures.** Auxiliary structures should be architecturally compatible with the rest of the site development. A good building may be ruined by poorly located mechanical equipment or storage areas.

(3) **Boats and Trailers.** Commercial uses involved in the storage, maintenance or repair of boats should provide adequate onsite parking for boats and trailers. Parking boats and trailers in front yard setbacks adjacent to the edge of the roadway without adequate screening are strongly discouraged, and are prohibited in commercial uses.

(4) **Service Areas.** Service areas should be located at the rear of the site wherever possible, and should be screened by the main structures. Service areas near the building should be screened with a wall of the same construction and materials as the building wall. Consider snow accumulation in planning access to service areas and trash receptacles.

- **Urban.** Widest range of appropriate solutions. Use walls or fences of similar colors and materials as the main building or structure. Avoid long straight runs of walls or fences with no articulation. Buffer walls and fences with landscape paintings. If chain link fence must be used, use only that which is coated in a dark color.

- **Rural Transition.** Screening service areas in rural transition areas may be accomplished by using structural or vegetative screens, or a combination of both. Range of appropriate h no articulation. Buffer walls and fences with landscape paintings. If chain link fence must be used, use only that which is coated in a dark color.

- **Rural.** Use landform and vegetation to screen the service area whenever possible. Use structural solutions only when no other solutions exist. Structural solutions are appropriate when buffering the service area from neighboring residents or recreational uses. Walls and fences of natural materials are appropriate in rural areas.

THE BASIS FOR DESIGN REVIEW GUIDELINES

The basis for establishing design review standards and guidelines is the Community Design threshold of the Land Use Element of the Regional Plan:



Community Design Threshold

The purpose of this Subelement is to implement the TRPA regional design criteria as they apply to the built environment. The Governing Board policy applicable to community design is derived from environmental threshold carrying capacities for scenic resources:

It shall be the policy of the TRPA Governing Board in development of the Regional Plan, in cooperation with local jurisdictions, to insure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the Region.

The Community Design subelement of the Regional Plan Goals and Policies also contains both goal and policy statements which identify design standards and guidelines as means to improve the overall design of the built environment. These goals and policies are the basis for the Design Review Guidelines, and may be found in Appendix A of this document.

Additional Code Standards Covered by This Manual

The majority of design guidelines provided in this manual address site planning standards found in Chapter 30 of the Code of Ordinances. In addition to Chapter 30, certain standards which directly affect design of the built environment are contained throughout the Code. In order to provide property owners and designers with solutions which meet these standards, additional guidelines not directly applicable to Chapter 30 are contained herein. They include:

- Chapter 22 Height Standards;
- Chapter 24 Driveway and Parking Standards;
- Chapter 26 Signs;
- Chapter 29 Historic Resources;
- Chapter 53 Shorezone Tolerance Districts and Development Standards;
- Chapter 54 Development Standards Lakeward of High Water;
- Chapter 64 Grading Standards; and
- Chapter 81 Water Quality Control.

REGIONAL VISUAL ENVIRONMENTS

At first glance the Lake Tahoe Region may appear to be a relatively homogenous forested landscape. Upon closer inspection, however, one finds a variety of visual environments including: urban centers, residential neighborhoods, small commercial nodes which serve the residential neighborhoods, large-scale recreation areas, and undeveloped stretches of wild and rural landscapes. Recognition of distinct visual environments within the Region has led to the establishment of three visual environments: urban, rural, and a rural transition environment between urban and rural areas.

These visual environments are described below. TRPA's regional design goals for site development in each environment are set forth in the table below, entitled Regional Design Principles. **Please review this table prior to design development.**

Visual Environment Descriptions

1. Urban Areas: Commercial areas should retain a small-scale, compact character that is well-integrated with the surrounding natural environment. The goal is to create urban areas that complement the existing environment and utilize it to enhance the quality of the built environment. Existing Examples: Tahoe City, South Lake Tahoe, Stateline, Kings Beach, Incline Village.
2. Rural Transition Areas: The visual appearance of rural transition areas should be a balance between man-made development and natural landscape features. In terms of site planning it is appropriate to fit the development into the rural transition landscape, taking advantage of existing site planning and design opportunities, while recognizing potential limitations of the landscape. Commercial and public service activities in rural transition areas are among the most visible uses in these areas. It will be especially important for both new and redeveloping commercial and public service uses to make use of design and site planning guidelines in order to minimize their visual impact in rural transition areas. Existing Examples: Round Hill, Zephyr Cove, Christmas Valley, Tahoma, Sunnyside, Homewood.
3. Rural Areas: Rural areas should retain the overall appearance and feeling of dominance by natural elements and processes. From a preservation of scenic quality standpoint, new development in rural areas should not be visually evident from the travel route. Where existing development is visually evident in the landscape, modification or redevelopment of it should be sited or screened so as to be visually subordinate. Existing Examples: Emerald Bay, Luther Pass, East Shore forests.

Regional Design Principles

The following matrix of Regional Design Principles establishes the intent of the Design Review Guidelines in the three visual environments. In many cases, design guidelines specific to each type of visual environment which meet the adopted design standard are recommended. Users of this manual are strongly encouraged to solve design problems using the concept of differing visual environments. An example of meeting a design standard in each visual environment is provided below. Additionally, design standards specific to each visual environment have been adopted for certain design elements located within TRPA-designated Scenic Highway Corridors. These standards are established in Section 30.13 of the Code, and may also be found in Section 10. of this manual.

REGIONAL DESIGN PRINCIPLES FOR THREE VISUAL ENVIRONMENTS

A. Urban Visual Environments

1. Scale of Development: Human scaled; places for people, especially pedestrians and bicycles; low vehicle speeds make detail appropriate.
2. Level of Human Activity: Highest of 3 environments; centers of commerce and activity where people create the interest in being there.
3. Access/Parking: Access constant and expected; parking is organized and readable; should be designed and sited to provide pleasing and attractive “car parks” wherever possible.
4. Architectural Style: Responds to context and setting; reflects community values and desires in terms of form, color, and material; pedestrian-oriented.
5. Landscaping: Embellish buildings; create interesting spaces which attract people; soften and screen undesirable views; most appropriate places for non-native plant palette, but native plants are recommended in areas outside immediate building sites.
6. Building Materials and Colors: Widest variety of colors and materials appropriate; reflects community or traditional values; community character strongly influenced by architecture.
7. Lighting: Appropriate to the use and to surrounding neighborhood lighting levels.
8. Signage: Orient individual signs to pedestrians, not autos; orient business/shopping complex identification signs to autos; widest range of colors and materials appropriate; competition of signs is inappropriate.

B. Rural Transition Visual Environments

1. Scale of Development: Linear experience of spaces for vehicles, pedestrians and bicycles; moderate vehicle speeds means less detail needed.
2. Level of Human Activity: Moderate; primarily residential, recreation activities with well organized landmarks of neighborhood commercial nodes.

3. Access/Parking: Access is controlled; parking integrated with setting; well buffered and sensitively sited; out of sight except in commercial/public service uses.
4. Architectural Style: Responds to context and setting; blends and appears to achieve a high degree of fit with the surrounding landscape.
5. Landscaping: Functional; used to highlight changes in use, access, etc; limited palette with some non-native species is appropriate; overall goal is to blend with setting.
6. Building Materials and Colors: More narrow range of materials and colors than in urban settings; responds to and blends with context of setting; natural appearing materials and colors are most appropriate.
7. Lighting: Intermittent, as needed; primarily used at intersections, nodes, and other activity areas.
8. Signage: Existence of sign itself will draw attention to the use; moderate range of materials and colors with emphasis on those which respond to context and setting; in most cases internal lighting is not necessary; competition of signs is inappropriate.

C. Rural Visual Environments

1. Scale of Development: Moderate-high vehicle speeds; humans become temporary yet participatory part of the landscape; less detail needed.
2. Level of Human Activity: Lowest of 3 environments, primarily recreation, sight-seeing and conservation activities; places where nature creates the focal interest.
3. Access/Parking: Points of access are nominal; parking is hidden except for existing uses and roadside scenic viewpoints.
4. Architectural Style: Responds to context and setting; typically small scale which does not dominate surrounding landscape.
5. Landscaping: Responsive to plant communities in setting; very few opportunities for non-native species except for foundation plantings and planters.
6. Building Materials and Colors: Narrowest range of colors and materials is appropriate; colors should be dark toned and harmonize with those in and around site; natural materials are most appropriate; natural appearing materials should be a minimum requirement.
7. Lighting: Minimal; only as necessary for safety and function.
8. Signage: Minimal need for signs; signs should be small scale as presence of sign alone will draw attention to use; limited to natural and natural-appearing colors and materials only.

MEETING DESIGN STANDARDS IN DIFFERENT VISUAL ENVIRONMENTS

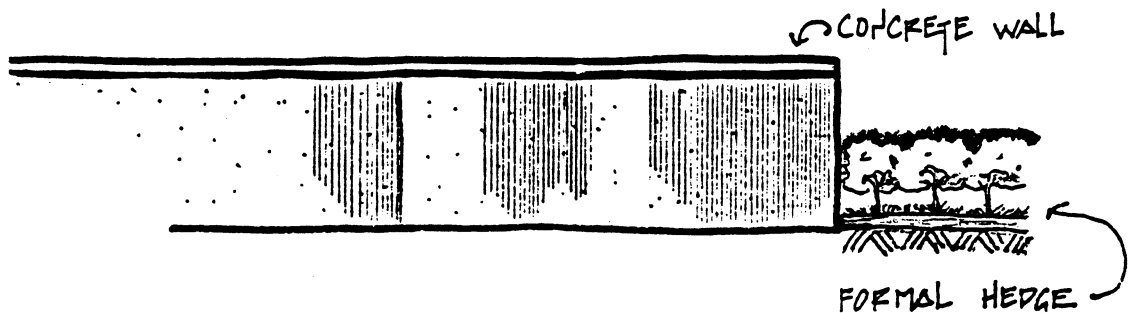
Standard: 30.5.B(4)

Screening of service yards, maintenance yards, warehousing, outdoor storage and trash and refuse collection areas shall be accomplished by the use of walls, fencing, landscape plantings or combinations thereof. Screening shall be effective in both winter and summer.

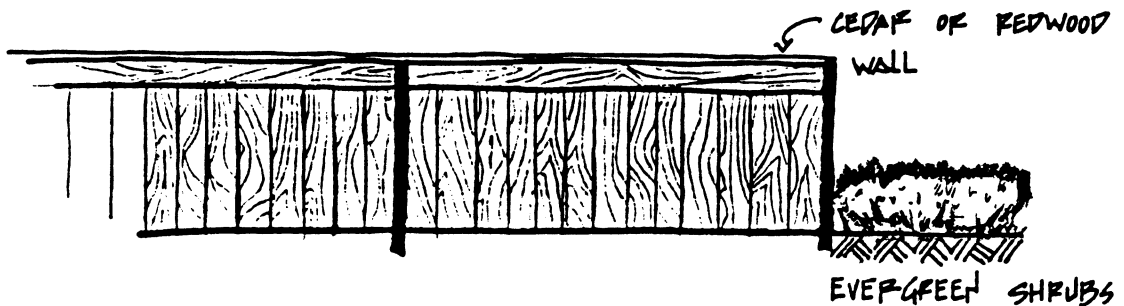
Guidelines:

1. Screen Outdoor Storage Trash Areas:

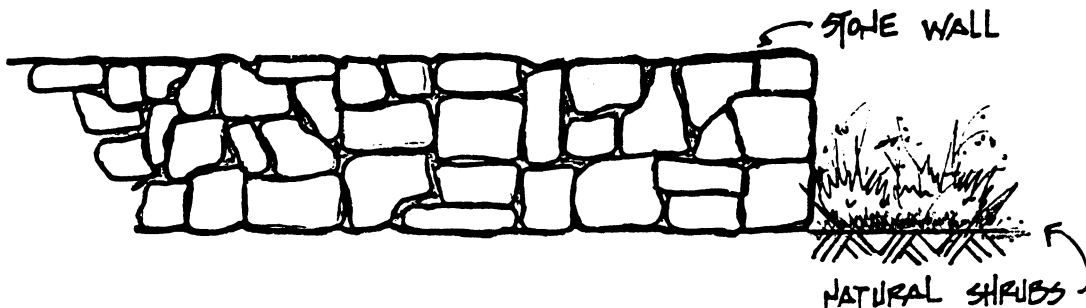
- a. **Urban** – Enclose trash disposal area with an architectural wall which is consistent with the main building in terms of form, color, materials or detailing. Additional screening may be provided by a landscape hedge.



- b. **Rural Transition** - Enclose trash disposal area with a rough-sawn fence of cedar or redwood. The enclosure can be further screened by evergreen shrubs with appear common to the area.



- c. **Rural** - Enclose trash disposal area with a low stone wall supplemented by native evergreen shrubs or small trees.



THE DESIGN PROCESS: ADVOCATING A DESIGN HOLISM

At first glance, this manual may seem to address design of the built environment in a segmented approach. What is intended, however, is to advocate a holistic approach to design, that where the whole is greater than the sum of the individual parts. As an example, the parts of a development project might include the building style, landscaping, signage, parking, interior floor plan and so forth. The whole is the complete site, from end to end, and from top floor to ground level. The holistic approach to design begins with a strong design concept. Once a design concept is formulated each design decision can then be made within the concept's framework. It is believed that this approach can provide a more complete, more coordinated final product than an approach which designs each project element as an isolated piece.

While there is no one universally accepted theory on how to produce good design, there exists an identifiable set of steps which are followed in almost everyone's design process:

1. Looking at what exists on the site;
2. Analyzing what you see in terms of constraints and opportunities relative to the intended use; and
3. Synthesizing a design or arrangement of spaces which matches the program of elements to the existing conditions of the land.

Although it appears straightforward, there are many complex and subtle decisions made during the design process which only experience and "open eyes" can foresee. Based on these intricacies and our own set of complex regulations, we strongly recommend that you retain design and engineering professionals (architects, landscape architects, interior designers, civil engineers and the like), to help prepare your plans.

Design Review Guidelines

1. SITE DESIGN

A. USE THE SITE AS A DESIGN DETERMINANT

Site design or site planning is the arrangement of indoor and outdoor spaces to accommodate the activities of a proposed use. An important goal of site design is to fit the buildings and other structures into the landscape in such a way that leaves the natural features of the site intact and functional. This is a small-scale application of the environmental threshold carrying capacity concept upon which land use planning in the Tahoe Region is based.

Standard: 30.5.A(1)

Existing natural features outside of the building site shall be retained and incorporated into the site design to the greatest extent feasible. Projects shall be designed to avoid disturbance to rock outcrops and stream environment zones and to minimize vegetation removal and maintain the natural slope of the project site.

Guidelines:

- (1) **Site Analysis.** Every project, no matter how large or small, should first prepare a site analysis. The analysis is a method to evaluate the existing conditions on or near the project site. The analysis should identify at a minimum the location and type of the following:
- (a) Topography and landform;
 - (b) Access;
 - (c) Vegetation;
 - (d) Views both onto the site and from the site;
 - (e) Places attractive to people (special places);
 - (f) Natural features;
 - (g) Aspect and orientation (sun/shadow patterns);
 - (h) Wind patterns;
 - (i) Location of utilities serving the site;
 - (j) Slope and drainage of the land;
 - (k) Impacts on the use of the site due to snow;
 - (l) Location of property boundaries and any required yard setbacks; and
 - (m) Contextual setting (neighboring land uses and building styles, height, mass and form of neighboring structures).

The analysis of each of these elements should be further evaluated in terms of design opportunities and design constraints. Design opportunities are those situations where the element in question will positively contribute to the overall project, while design constraints are situations where a specific element will detract or conflict with the overall project.

The opportunities and constraints identified in the site analysis should be used

as design determinants in the design and development stages of the project. Additionally, if structures are planned as part of the project, an architectural analysis should be prepared. Please see Section 2, Building Design, for the contents of an architectural analysis.

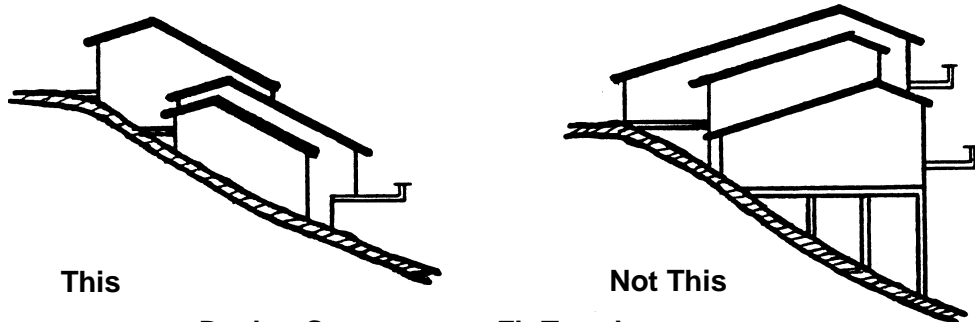
- (2) **Incorporate Natural Features Into the Site Design.** Incorporating natural landscape features into the site design can produce some of the most interesting and unusual designs possible. Integrating these features on a site-specific basis can result in harmony between the built and natural environments. The following are examples of incorporating natural landscape features into the site design:

- (a) Step a building around a mature tree or large boulder rather than remove them;
- (b) Locate structures or impervious surfaces away from areas of significant vegetation, wetlands, and stream zones; (see Standard 30.5.A)
- (c) Build a deck around rock outcroppings and incorporate them into the space;
- (d) Bend a driveway around large boulders rather than removing large boulders or other features in order to create a straight driveway.

- (3) **Building and Site Design.** Buildings designed for sloping topography should conform to the natural topography rather than altering the natural topography to accommodate the structure. In areas where slopes exceed five percent, stepped foundations are recommended in order to avoid grading necessary for flat-pad foundations.

The form, mass and profile of individual buildings and architectural features should be designed to blend with the natural terrain and preserve the character and profile of the site as much as possible. Techniques that should be considered include:

- (a) Split pads, pier foundations, stepped footings, and grade separations to permit dwellings to step down or step up the natural slope;
- (b) Flat rooflines and/or low profiles with rooflines following the lines of the natural slope;
- (c) Detached garages, carports, or open parking to decrease apparent building mass;
- (d) Varied and articulated elevations and rooflines to soften the appearance of large vertical surfaces and to avoid the appearance of a massive, rigid, vertical element.



Design Structures to Fit Terrain

Standard: 30.5.A(2)

Projects shall be designed to use existing disturbed areas rather than undisturbed areas for the siting of all improvements except when:

- (a) *The disturbed area is precluded from development by setbacks or other such limitations;*
- (b) *The disturbed lands are classified as sensitive lands and alternative sites classified as nonsensitive exist on the parcel;*
- (c) *The use of the disturbed lands would require more total disturbance than use of undisturbed lands;*
- (d) *Avoidance of other development impacts are of more importance than the preservation of undisturbed areas; or*
- (e) *The degree of existing disturbance is minor and the area shall be restored as part of the project.*

Guidelines:

- (1) **Use Existing Disturbed Areas.** Use existing disturbed areas onsite as areas to concentrate structures and other land coverage.
 - (a) Disturbed areas often have been compacted by previous activity. This makes them good sites for driveways, garages, parking areas and walkways.
 - (b) Disturbed areas which have been compacted are often inhospitable areas for landscaping and plant materials.
- (2) **Restore Disturbed Areas.** Restore all previously disturbed areas which are not covered with impervious surfaces. Restoration may include regrading, revegetation or landscaping. See also TRPA's Handbook of Best Management Practices for restoration techniques.

B. DESIGNING FOR VIEWS

Due to topography, landform and the outstanding natural landscape features in the Region, views and viewsheds take on added importance as design features. The economic importance of views and viewsheds is readily apparent in the relative cost of homes and lands which have views. Viewshed analysis is an important tool in the site design process. When analyzing views and viewsheds your goals should be to identify the location and extent of views from your site as well as views to your site. A good rule of thumb is that if you can see a particular place such as a road or a recreation area or even a neighbor's house from your site, then a person in any of those locations can likely see your site.

Views come in a variety of shapes and sizes. These can range from a filtered view of the Lake through a stand of trees to a panoramic view of an entire shoreline with no visual obstructions. It is important to identify and map all the views you can. It is at least as important to consider views to your site from public places such as roads, the Lake, and recreation areas as it is to consider views out from your site. How your project affects views from public places will in the long run be more important to maintaining the scenic quality of and visual access to those resources which attract people in the first place.

Standard: 22.7

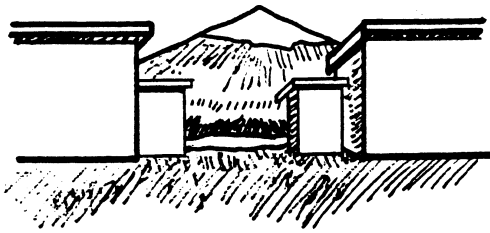
Note: This standard contains only a portion of the standards (required findings) for additional height. Please refer to Section 2. Building Design.

The findings required in this chapter relative to view protection are as follows:

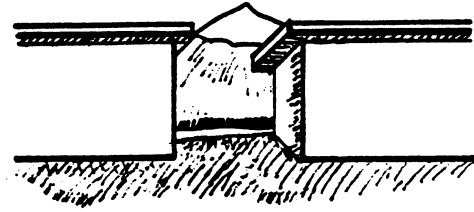
- (1) *When viewed from major arterials, scenic turnouts, public recreation areas or the waters of Lake Tahoe, from a distance of 300 feet, the additional height will not cause a building to extend above the forest canopy, when present, or a ridgeline.*
- (3) *With respect to that portion of the building which is permitted the additional height, the building has been designed to minimize interference with existing views within the area to the extent practicable.*
- (5) *That portion of the building which is permitted the additional height, is adequately screened, as seen from major arterials, the waters of lakes, and other public areas from which the building is frequently viewed. In determining the adequacy of screening, consideration shall be given to the degree to which a combination of the following features causes the building to blend or merge with the background.*
 - (a) *The horizontal distance from which the building is viewed;*
 - (b) *The extent of screening; and*
 - (c) *Proposed exterior colors and building materials.*

Guidelines:

- (1) **View Corridors.** The siting and design of new development should preserve or change existing view corridors through to the lake, the surrounding ridgelines and the natural landscape.
 - (a) Where new view corridors are opened up by new development, the siting and massing of buildings and landscaping should be designed to enframe and enhance views.
 - (b) The size of the opening to be maintained as a view corridor should be sufficient to permit significant view penetration (i.e., wide enough to provide visual interest).
 - (c) Buildings should not appear to exceed the height of the mountain backdrop when viewed from the lakes, major public areas, or travel corridors.
 - (d) When a view of a mountain peak or other natural features is involved, the distance between buildings should be sufficient to permit views that allow the entire shape of the natural form to be apparent. This often can be accomplished by stepping back the upper stories of structures in combination with setting the bases of buildings farther apart.
 - (e) In developments with multiple structures, clustering the structures can create the open space necessary for view corridors.



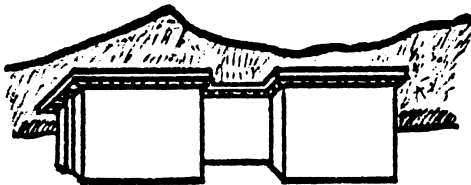
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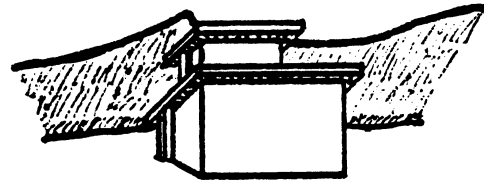
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Maintain View Corridors Between Structures

- (2) **Mountain Backdrops.** Building sites with visually significant mountain backdrops should avoid siting tall structures which would obscure or compete with the mountain view. Low building forms should be used instead. Increasing the building setback from major public viewpoints (i.e. the road, beach, etc.) also can reduce the obstruction of views caused by a structure.



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Not This

Preserve Views of Ridgelines

- (3) **Views from Roadway.** Along segments of the Basin's roadways, mountains and ridgelines often dominate straight ahead views (i.e. Mt. Tallac as seen from Highway 50 in South Lake Tahoe). Existing scenic features should be protected by not allowing structures to obscure the land form.

Taller structures which would interrupt the profile of the ridge or hill should be avoided. Similarly, structures should be sited a sufficient distance from the roadway or stepped back to avoid disruption of view.

- (4) **View Protection.** Where possible, new hillside development should be sited at either sufficient horizontal or vertical distance from other structures that outward views are retained for both existing and new development. This recommendation can be most effectively implemented in planned unit developments and subdivisions. However, the siting and design of dwelling units downhill from existing development should consider their views.

C. GRADING AND DRAINAGE

Standards: 64.6

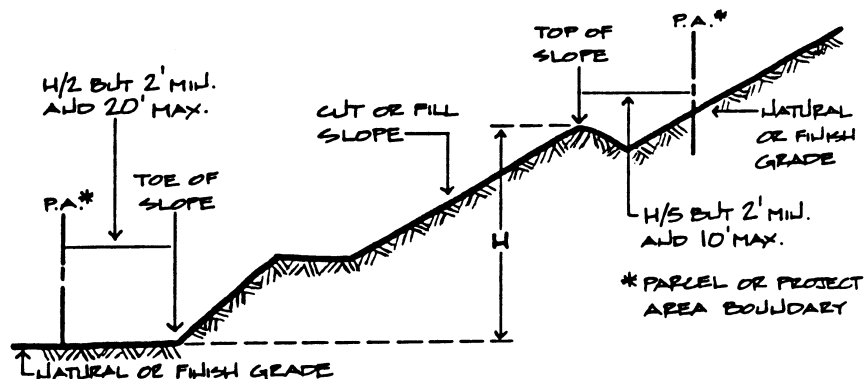
The following standards shall apply to cutting and filling of earthen material:

64.6.A Cuts: Standards for cuts are:

- (1) The maximum cut slope shall be determined on the basis of the risk of soil instability or soil erodibility. Additional information, which may include a subsurface soil and geological report, pursuant to Chapter 61, or other available information may be required.
- (2) If the material of the slope is of such composition and character as to be unstable under anticipated conditions, TRPA shall require such measures as are necessary to ensure the stability of the slope. Such measures may include, but are not limited to, reduction of the slope angle and mechanical stabilization of the slope.
- (3) TRPA may impose setbacks as set forth in the Design Review Guidelines.
- (4) Where mechanical stabilization or containment of the slope by other than the use of natural material is employed, conditions of approval may require screening by vegetation.

64.6.B Fills: Standards for fills are:

- (1) The maximum fill slope shall be determined on the basis of the risk of instability or soil erodibility. Additional information, which may include a subsurface soil and geological report pursuant to Chapter 61, or other available information, may be required.
- (2) No organic material, such as vegetation or rubbish, or any other material not capable of proper compaction, or otherwise not conducive to stability, or which has the potential for environmental impact, shall be permitted in fills.
- (3) Borrowing for fill is prohibited unless approved by TRPA. Borrowing of material from rockfalls and slides may be allowed pursuant to memorandums of understanding between TRPA and road maintenance organizations. Approved borrow sites shall be subject to subsection 64.6.A.
- (4) TRPA may impose setbacks as set forth in the Design Review Guidelines.



Uniform Building Code Grading Setbacks

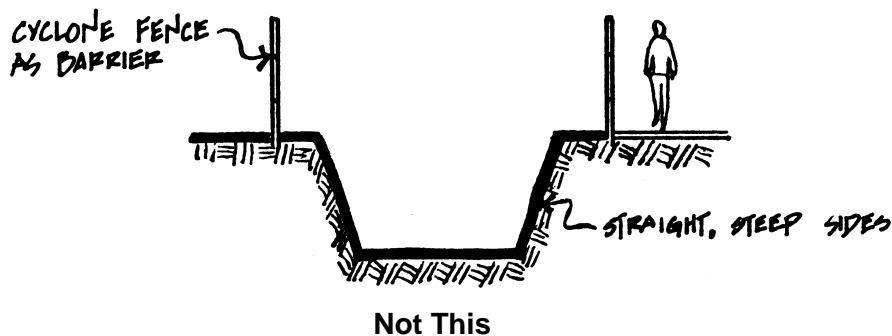
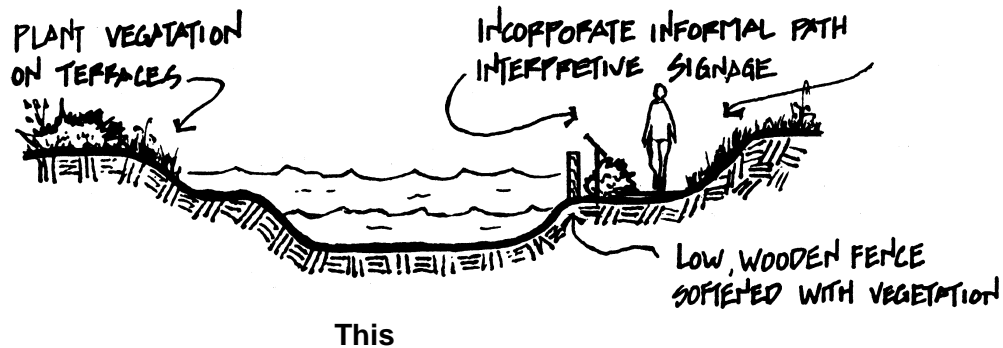
Guidelines:

- (1) **Limit Grading.** All grading should be kept to a minimum. Extensive regrading of a site to create building pads for construction is not recommended. Buildings should be fitted to the land with graded areas limited, whenever possible, to the portion of the site to be covered by the structure. When graded areas cannot be covered by the structure, they should preferably be screened from public views by the building.
- (2) **Visual Mitigation.** In order to minimize the visual impacts associated with grading, the following grading guidelines are recommended:
 - (a) The overall shape, height, and grade of any cut or fill slope should be designed to simulated the existing natural contours and scale of the natural terrain of the site;
 - (b) The angle of a graded slope should be gradually adjusted so that it merges smoothly into the angle of the natural terrain. Flat planes and sharp angles which suggest a more formal landscape should be reserved for institutional and public service sites when a formal landscape is desired;
 - (c) Graded slopes should be promptly revegetated with a ground cover or combination of ground cover, shrubs, and trees to reduce the visual impact of the graded slope and to stabilize the slope and minimize erosion.
- (3) **Roadway Dimensions.** Minimal roadway dimensions are recommended to reduce the amount of grading required, thus reducing the visual impact. A looped system of one-way streets can be used or roadways may be split (i.e., one lane in either direction) in order to reduce the area of cut required on a hillside.
- (4) **Preserve Existing Vegetation.** Grading should be designed to minimize the disruption to existing vegetation (including ground covers and shrubs, as well as trees). Revegetation of graded areas should utilize plant materials that will blend well with the surrounding vegetation, and are on TRPA's List of Approved Plant Species.
- (5) **Slope Configuration.** When graded slopes (either cut or fill) extend horizontally for more than 100 feet (such as along roadways), the contours should be curved to create an undulating bank with greater visual variety and a more natural appearance.

Long, straight engineered slopes look unnatural and detract from the scenic quality of the roadway landscape. Varying slope bank gradients (i.e., 2:1 in some areas, 3:1, 5:1, etc. in others) is another method for producing graded slopes that have a more natural appearance.
- (6) **Sediment Basins.** Also known as retention or detention basins, sediment basins are used to remove sediment from storm water and other surface water runoff. TRPA's Handbook of Best Management Practices provides standards and specifications dealing with the installation and operation of sediment basins, and should be consulted early in the design process.

The appearance and integration of these systems into the landscape can be greatly improved over existing practices. In times of non-storm events the basins can serve as open spaces in neighborhoods or in existing recreation areas.

Terrace basin slopes whenever possible as shown below in order to minimize the safety hazard of straight, deep slopes.



Terracing of side slopes also allows sediment basins to be integrated into other types of land uses such as trail systems, golf course hazards, or wetland systems. This may be an important consideration when siting a sediment basin.

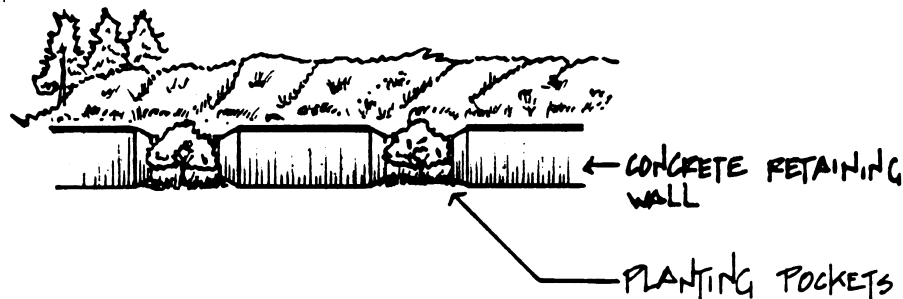
Restricting access to sediment basins has often been accomplished by 6 foot high cyclone or chain link fence with little or no additional landscape screening. A more visually successful solution is to combine changes in grade with low (3-4 feet high) wooden fencing, and a substantial landscape screen of trees, shrubs, and ground cover. Formal landscape plantings will give a more formal or urban appearance, while native or naturalized grasses and riparian species can give the appearance of a wet meadow or wetland marsh. All mechanical equipment should be screened from view of the road or the lake.

The use of signs around sediment basins should be incorporated into the design. Signs should be of an interpretive nature as well as regulatory explaining in simple English the function and potential hazards of sediment basins. A well thought-out signage plan can stress the importance of avoiding sediment basins during and after storm events. A combination of grading, landscaping, controlling access and signage can turn a traditionally attractive nuisance and visual eyesore into a pleasing and usable community resource. It is appropriate to increase the access restrictions to basins which are potentially more hazardous due to such factors as degree of side slope, depth, and volume.

- (7) **Retaining Walls.** Maximum height of retaining walls should be limited to three or four feet. When slopes greater than three vertical feet must be retained, terraces should generally be used to create smaller grade changes (three to five feet or less). Areas between terraces should be wide enough to accommodate vegetation. Downhill sides of retaining walls should be planted in order to help screen the structure. Please also see the [Handbook of Best Management Practices](#).

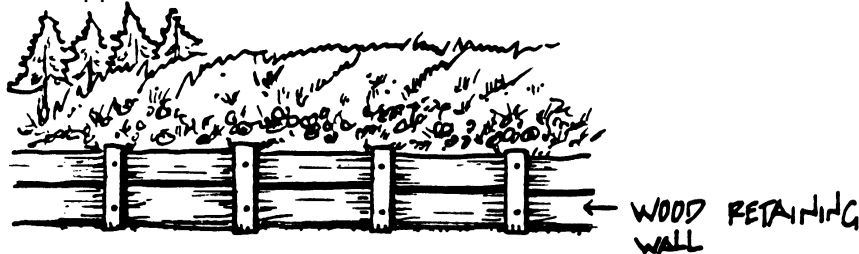
Long straight unbroken retaining walls with no articulation or other surface features are strongly discouraged, especially when they are sited along roadways. Retaining walls which match the architectural style, color and materials of a project's primary structures are also appropriate. Retaining walls are often used as informal seating. In areas where this appears likely, consideration should be given to providing seating.

- Urban. Retaining walls in urban areas may be built from the widest range of materials including textured concrete, wood, stone, or brick. Wherever possible retaining walls should be accompanied with landscape planting pockets to soften the wall's appearance.



Urban Retaining Wall

- Rural Transition. In rural transition areas the setting and context of the site as well as the site's primary use should be used to determine whether retaining walls will have more of an urban appearance (i.e., form, color, materials), or a rural appearance.



Rural Transition Retaining Wall

- Rural. In rural areas the narrowest range of materials should be used. These should be limited to wood (including wood timbers and logs) or stone, combined with planting areas or pockets wherever possible.



Rural Retaining Wall

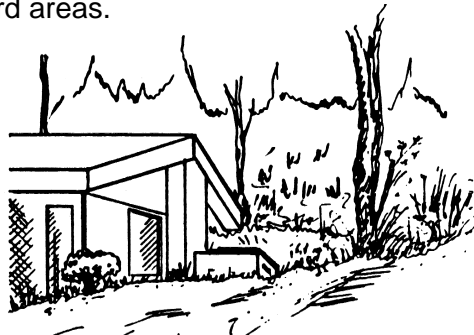
D. SCREENING METHODS

Standard: 30.5.B

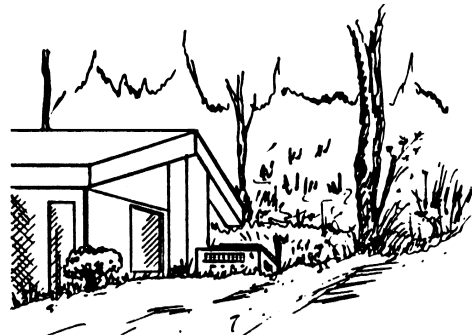
- (4) *Screening of service yards, maintenance yards, warehousing, outdoor storage and trash and refuse collection areas shall be accomplished by the use of walls, fencing, landscape plantings or combinations thereof. Screening shall be effective in both winter and summer.*
- (5) *Service yards, maintenance yards, warehousing, and outdoor storage areas shall be located in areas which are not highly visible from major transportation corridors, scenic turnouts, public recreation areas or the waters of lakes in the Region.*

Guidelines:

- (1) **Mechanical Equipment.** Site design should consider the placement and screening of service areas and auxiliary structures. This includes service yards, maintenance areas, outdoor storage fuel tanks, trash and refuse collection or disposal, and other utility meters and hardware. Utility meters and service functions should not be visible on the primary facades of buildings or in front yard areas.



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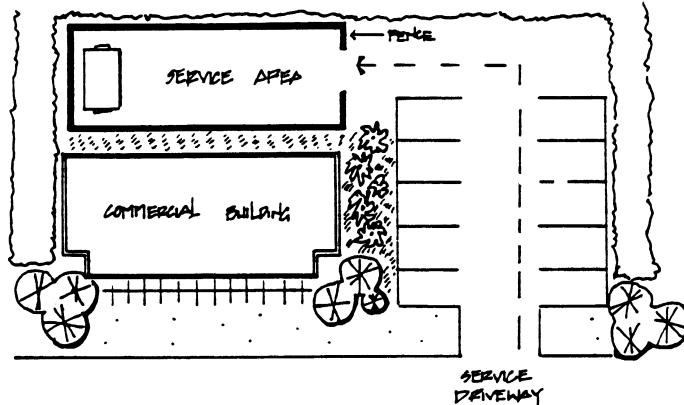


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Screen Mechanical Equipment From Public Views

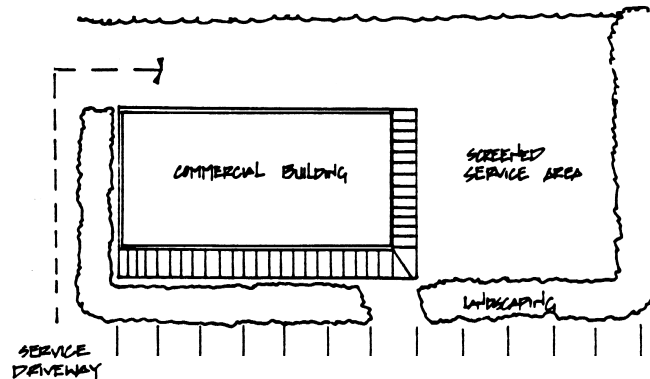
- (2) **Auxiliary Structures.** Auxiliary structures should be architecturally compatible with the rest of the site development. A good building may be ruined by poorly located mechanical equipment or storage areas.
- (3) **Boats and Trailers.** Commercial uses involved in the storage, maintenance or repair of boats should provide adequate onsite parking for boats and trailers. Parking boats and trailers in front yard setbacks adjacent to the edge of the roadway without adequate screening are strongly discouraged, and prohibited in commercial uses.
- (4) **Service Areas.** Service areas should be located at the rear of the site whenever possible, and should be screened by the main structures. Service areas near the building should be screened with a wall of the same construction and materials as the building wall. Consider snow accumulation in planning access to service areas and trash receptacles.

- **Urban.** Widest range of appropriate solutions. Use walls or fences of similar colors and materials as main building or structure. Avoid long straight runs of walls or fences with no articulation. Buffer walls and fences with landscape plantings. If chain link fence must be used, use only that which is coated in a dark color.



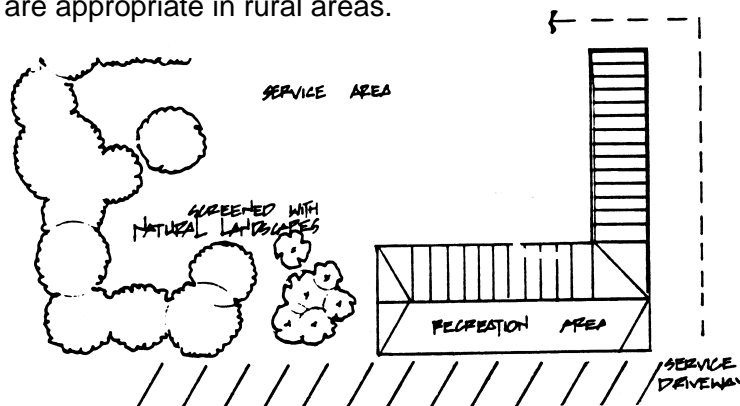
Screening Urban Service Areas

- **Rural Transition.** Screening service areas in rural transition areas may be accomplished by using structural or vegetative screens, or a combination of both. Range of appropriate materials is more narrow than in urban areas.



Screening Rural Transition Service Areas

- **Rural.** Use landform and vegetation to screen the service area whenever possible. Use structural solutions only when no other solutions exist. Structural solutions are appropriate when buffering the service area from neighboring residents or recreational uses. Walls and fences of natural materials are appropriate in rural areas.



Screening Rural Service Areas

- (5) **Trash Enclosures.** Trash disposal areas should be enclosed by a fence or wall and equipped with doors and hardware of durable materials. The edge of the disposal area should be landscaped. The pad in front of the trash enclosure should be reinforced to carry the weight of service vehicles.
- Urban. See (4) Urban Service Areas guidelines above.
 - Rural Transition. See (4) Rural Transition Service Areas guidelines above.
 - Rural. See (4) Rural Service Areas guidelines above.

Walls and Fences

Local jurisdictions within the Region have differing requirements as to the height and location of fences. Please check these requirements before designing your project. Also, please check to see whether or not you're within a Regional scenic highway corridor. Your fence project may block an important view or other scenic resource.

Guidelines:

- (1) **Positive Visual Screening.** Walls and fences often obstruct views, and generally decrease the natural and open character of the landscape. For this reason, the use of walls and fences is not encouraged from a visual standpoint unless it provides positive visual screening of development.

The use of walls or fences to simply define one's property is not recommended. In areas where views of the lake or other significant features are available, walls and fences should be avoided or designed so that they do not obstruct views.

- (2) **Integration with Setting.** The siting and design of walls and fencing should respect existing land forms and vegetation patterns and blend into the natural landscape as much as possible, rather than arbitrarily following site boundary lines.

- (3) **Design and Materials.** The design of fences, walls, and other structural landscape features should be compatible with and complementary to the site architecture and the natural landscape.

Avoid long, straight runs of walls and fences with no articulation or other visual relief.

Chain link fences are strongly discouraged except as temporary construction fences or as absolutely required for safety purposes. Permanent chain link fences are acceptable when coated with a dark coating or otherwise permanently colored using dark colors. Consider the use of range wire fencing (also known as welded wire fence) as an alternative.

- Urban. The widest range of fencing materials is appropriate in urban areas. This includes textured and color-tinted concrete, wood, brick and stone.
- Rural Transition. Range of appropriate materials in rural transition areas is more narrow than in urban areas. Wood, stone, and range or welded wire fencing are most appropriate.

- Rural. In rural areas, the narrowest range of fencing materials should be used. The materials should be limited to wood (including timbers and post and pole type) and stone, and combined with planting areas or pockets whenever possible.
- (4) **Landscaping.** All fences, walls and other structural landscape features should be accompanied by landscaping to better integrate the structures with the site and to reduce their visual impacts. An exception to this is in urban areas where the wall is to be used as an architectural feature. See Section 6. Landscaping, for guidelines regarding landscaping.
- (5) **Outdoor Storage Areas.** Outdoor storage and work areas should be adequately screened by a solid fence, wall, or hedge. The area being screened should not be visible through the screen. Chain link fencing is not recommended unless combined with landscaping and surfaced with black coating. Equipment and materials should not be stacked higher than the top of the fence.

Landscaped areas should be provided in front of the screen if it is within 20 feet of the street. Where visibility of storage areas is needed for security purposes, a neatly appearing, well kept, orderly layout of vehicles and materials is encouraged. Outdoor storage areas which are located next to or near residential or recreational uses should be especially well buffered in order to minimize potential adverse impacts.

- Urban. Outdoor storage areas in urban areas may be screened using the widest variety of forms and materials, including textured and color-tinted concrete, wood, stone, or brick. Wherever possible, screening should be accompanied with landscaping, especially trees and shrubs, to soften the structure. The storage area can also be screened by siting it behind other structures onsite. Care should be taken to provide screening from side streets when they are adjacent to the site.
 - Rural Transition. A more narrow range of materials is appropriate in rural transition areas than in urban areas. Locate storage at the rear of the site wherever possible.
 - Rural. Outdoor storage areas in rural areas should maximize the landform, vegetation and distance in order to provide screening. Structural solutions should be considered only when no other solution exists. In rural areas, walls and fences used to screen outdoor service areas should be constructed primarily of wood and stone.
- (6) **Service Yards.** Locate service and maintenance yards, warehousing and outdoor storage areas to the rear of the site and out of the view from the road.
- (7) **Auxiliary Structures.** Auxiliary structures used for warehousing and storage should complement or be similar to the design of the main buildings on the site.

2. BUILDING DESIGN

The planning and design of any new building, structure, or addition should include architectural analysis. The analysis should inventory the height and mass of neighboring structures, along with any recognizable design style or theme. The analysis may also include a sun and shadow study for all on-site structures, and adjacent structures which may affect the site.

A. BUILDING DESIGN

Standard: 30.6.A of

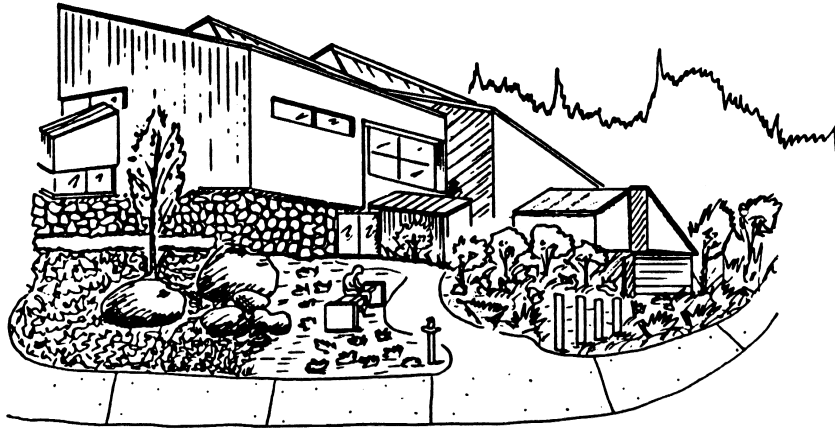
In accordance with Section 30.1, the following building design standards shall apply. The general standards are:

- (1) *The architectural design of a project shall include elements that screen from public view all external mechanical equipment, including refuse enclosures, electrical transformer pads and vaults, satellite receiving disks, communication equipment, and utility hardware on roofs, buildings or the ground.*
- (2) *Roofs, including mechanical equipment and skylights shall be constructed of nonglare finishes that minimize reflectivity. Roofs, including mechanical equipment and skylights shall be constructed of nonglare finishes and earthtone colors that minimize reflectivity. For this subparagraph, non-glare earthtone colors are defined as Munsell® Colors set forth in Appendix G, TRPA Approved Earthtone Colors, of the Design Review Guidelines, that have a value and chroma 0-4.[§]*
- (3) *For all structures visible from the Scenic Threshold Travel Routes and from Public Recreation Area and Bicycle Trails identified in the 1993 Lake Tahoe Basin Scenic Resource Evaluation, subdued colors of earthtone ranges shall be used for the primary color of structures. Colors shall be within a range of natural colors that blend, rather than contrast, with the existing vegetation and soils color. For this subparagraph, earthtone colors shall be medium to dark and shall meet the Munsell® Colors set forth in Appendix G, TRPA Approved Earthtone Colors, of the Design Review Guidelines. TRPA may grant exceptions to this provision pursuant to Section 29.6, for scenic roadway corridors designated as urban, for unique situations such as site characteristics, or as set forth in Section 53.10. Structures in the shoreland that were constructed prior to January 1, 1950 may maintain their historic colors when doing exempt maintenance and repair.[§]*

Guidelines:

- (1) **Siting, Scale and Massing.** The siting, scale and massing of new buildings and structures should be compatible with existing development (when such development is consistent with the design review guidelines or the intent of the community plan governing the area). The siting, scale and massing of new buildings and structures should be subordinate to the area's scenic features. The project should not decrease the visibility of such features.

[§] Amended 11/20/02



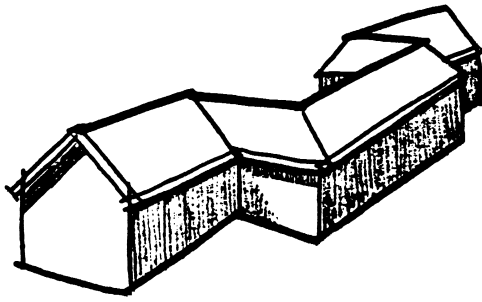
Create Positive Outdoor Spaces

- (2) **Provide Usable Outdoor Spaces.** Building design and site planning should consider the types of outdoor spaces that will be created by a development. Building forms and building complexes should be designed to create “positive” outdoor spaces that have their own identity and function due to their enclosure by and orientation to the buildings, rather than being left-over, unused areas. Often during a site analysis “special places” are identified. These places are often best used as outdoor spaces. “Special places” often lose their special qualities when covered with a building.
- (3) **Use a Comprehensive Design.** All structures within a project should be integrally designed with strong architectural and spatial relationships. The same or complementary design, materials, and colors used on the main structures should be used on accessory structures on the site.
- (4) **Establish An Architectural Style.** Major building forms should express a simplicity and directness responsive to the vernacular traditions of mountain architecture. Design elements which contributed to the “Old Tahoe” design style are listed at the beginning of the Historic Buildings Section of this manual. These guidelines, however, do not intend to limit creative design solutions made possible by advances in building technology. The goal is for functional design solutions that are compatible with the natural environment and contribute to the character and quality of the built environment.

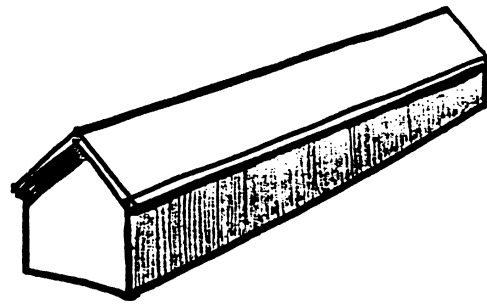
Variety and distinctiveness in design are desirable as they often are seen as extensions of the people who inhabit them. Homogenous, suburban-like streetscapes created by a monotony of building design are not encouraged.

- (5) **Articulate Building Facades.** Long, straight building facades are generally uninviting and visually uninteresting. Vary building setbacks and articulate facades to add visual variety, distinctiveness, and human scale to commercial areas.

It is essential that the variety appears coordinated within visually ordered system and not haphazard, cluttered or confusing. The spaces created by the varied setbacks of the building facades can accommodate landscaping and pedestrian seating areas that contribute visual interest.



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Articulate Building Facades

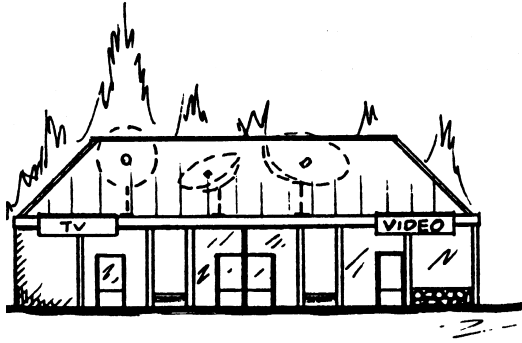
- (6) **Integrate Auxiliary Structures.** Auxiliary structures, frequently associated with commercial buildings, such as trash enclosures, newspaper racks, phone booths, vending machines, etc., should be integrated into the design of the development in order to create a pleasing appearance both on- and off-site.

Elements such as outdoor storage areas, mechanical equipment, loading areas, and trash disposal areas should be sited away from public views whenever possible and carefully screened.

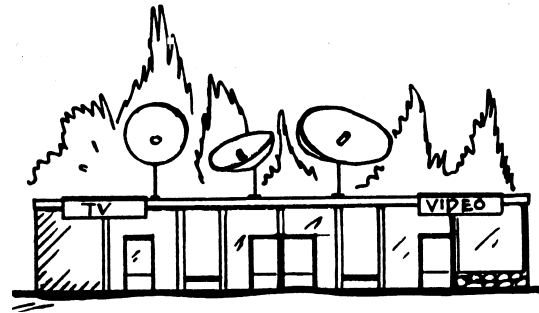
- (7) **Screen Satellite Dish Antennae.** Satellite dish antennae and other communication equipment should not be visible from public roads, recreation areas, or the Lake. The following techniques should be used in order to reduce visibility of this equipment to the maximum extent possible.

- (a) Satellite dishes should be screened through the use of landscaping and plant materials, walls and fences, existing structures, sub-grade placements or other means. Screening should be effective year round.
- (b) All wires or cables related to the communication equipment should be installed underground where it would otherwise be visible from public roads, recreation areas, and the Lake.
- (c) The color of satellite dishes should be compatible with the surrounding setting including the natural landscape and the built environment. The appearance of existing antennae and dishes suggests that darker colors, particularly black mesh, blend into the forest cover better than light colors. Antennae and dishes with white, unpainted, or reflective surfaces are strongly discouraged.
- (d) The use of mesh satellite is preferable to solid dishes because they more effectively blend into their surroundings.
- (e) Satellite dishes should only be located on a building when they are architecturally integrated into the structure and they are not visible from roads, the lake, or scenic viewpoints.

- (8) **Screen Roof Mounted Mechanical Equipment.** Screening should be provided for all roof-mounted mechanical and electrical equipment as an integral part of the building's design. Any exposed vents or flashing should be colored to blend in with the roof surface, and should not be left as reflective, metallic surfaces.



This



Not This

Screen Satellite Dish Antennae

- (9) **Screen Ground Mounted Mechanical Equipment.** Please refer to the guidelines in Section 1. Site Design, for screening ground mounted mechanical equipment.
- (10) **Use Roof Surfaces to Help Integrate the Building.** The form, color, and texture of a building's roof should be an integral part of the building design, and should be compatible with both the natural environment and the man-made setting. Compatibility can be produced by selecting appropriate roofing materials. It is recommended that roof surfaces generally be dark in color, with a low reflectivity. Skylights and solar-energy collector panels are recognized exceptions to this guideline. Metal roofs are appropriate when the metal has a low-gloss finish of low reflectivity. This generally means dark colors (greens, browns, dark gray, black) with a matte finish that fall within the Munsell color ranges in Appendix G.[§] Additionally, the use of articulated roof surfaces using features such as gables, clerestories, and dormers will break up continuous roof planes and help integrate the structure into the setting.

A wider range of roof surfaces is appropriate in urban areas. Appropriate materials include those identified above, along with slate, concrete, terra cotta tiles, fiberglass and asphalt shingles, and tar/gravel for flat roofs.

- (11) **Design for Snow.** In the Lake Tahoe one must accommodate snow, especially in building design. This manual also contains standards and guidelines for storing plowed or otherwise collected snow. Please also refer to the guidelines in Section 5. Snow Storage. In terms of building designs the following guidelines are recommended:
- (a) Locate entrances under the gable ends of pitched roofs;
 - (b) Do not locate entrances beneath roof eaves;
 - (c) Do not located parking, access, or walkways under roof eaves;
 - (d) Cover stairs and other entrances;
 - (e) Do not locate stairs under the drip line of roof eaves; and
 - (f) Do not extend balconies beyond roof eaves.

[§] Amended 11/20/02

- (12) **Incorporate Signage Into the Building.** If a building sign is intended, the façade should be designed to accommodate signage so that a business will have advertising space without detracting from the appearance of the structure. See also guidelines in Section 8. Signs.

B. BUILDING AND STRUCTURE HEIGHTS

Maximum building and structure heights are regulated in Chapter 22, and are listed below. Building and structure heights will vary in different areas depending on the land use and the characteristics of the natural landscape. From a scenic standpoint the two height-related considerations are: 1) compatibility with the natural environment; and 2) compatibility with the built environment. Compatibility is evaluated based on preserving and even enhancing views of scenic features such as the lake, a ridgeline, or a meadow. These guidelines emphasize preserving public or common views as opposed to individual's views. When designing your project it will be important to consider how it affects public views of scenic features that may be available.

Standard: 22.3

Height Standards For Buildings: Except as provided for in Section 22.4, no building shall have a maximum height greater than set forth in Table A. Chimneys, flues, vents, antennas, and similar appurtenances, may be erected to a height ten per cent greater than the otherwise permissible maximum height of a building, or a height of six feet, whichever is less.

Example:

*Percent slope retained across building site = 16%
Proposed roof pitch = 10:12
Maximum height = 40' 0"*

TABLE A MAXIMUM HEIGHTS FOR BUILDINGS

Percent Slope Retained Across Building Site	ROOF PITCH										
	0:12	1:12	2:12	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12 or >
0	24'-0"	25'-2"	26'-5"	27'-7"	28'-9"	30'-0"	31'-2"	32'-5"	33'-7"	34'-9"	36'-0"
2	24'-6"	25'-8"	26'-11"	28'-1"	29'-3"	30'-6"	31'-8"	32'-11"	34'-1"	35'-3"	36'-6"
4	25'-0"	26'-2"	27'-5"	28'-7"	29'-9"	31'-0"	32'-2"	33'-5"	34'-7"	35'-9"	37'-0"
6	25'-6"	26'-8"	27'-11"	29'-1"	30'-3"	31'-6"	32'-8"	33'-11"	35'-1"	36'-3"	37'-6"
8	26'-0"	27'-2"	28'-5"	29'-7"	30'-9"	32'-0"	33'-2"	34'-5"	35'-7"	36'-9"	38'-0"
10	26'-6"	27'-8"	28'-11"	30'-1"	31'-3"	32'-6"	33'-8"	34'-11"	36'-1"	37'-3"	38'-6"
12	27'-0"	28'-2"	29'-5"	30'-7"	31'-9"	33'-0"	34'-2"	35'-5"	36'-7"	37'-9"	39'-0"
14	27'-6"	28'-8"	29'-11"	31'-1"	32'-3"	33'-6"	34'-8"	35'-11"	37'-1"	38'-3"	39'-6"
16	28'-0"	29'-2"	30'-5"	31'-7"	32'-9"	34'-0"	35'-2"	36'-5"	37'-7"	38'-9"	40'-0"
18	28'-6"	29'-8"	30'-11"	32'-1"	33'-3"	34'-6"	35'-8"	36'-11"	38'-1"	39'-3"	40'-6"
20	29'-0"	30'-2"	31'-5"	32'-7"	33'-9"	35'-0"	36'-2"	37'-5"	38'-7"	39'-9"	41'-0"
22	29'-6"	30'-8"	31'-11"	33'-1"	34'-3"	35'-6"	36'-8"	37'-11"	39'-1"	40'-3"	41'-6"
24 or >	30'-0"	31'-2"	32'-5"	33'-7"	34'-9"	36'-0"	37'-2"	38'-5"	39'-7"	40'-9"	42'-0"

Standard: 22.4.B

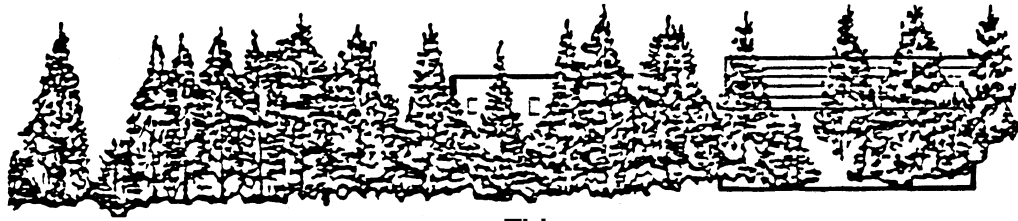
Additional Height For Tourist Accommodation Buildings Within Community Plan Areas: In addition to the provisions set forth in Subsection 22.4.A, TRPA may approve building heights greater than those set forth in Section 22.3 for buildings whose primary use is tourist accommodation, and which are located within an approved community plan as set forth in Chapter 14. The maximum heights specified in Table A may be increased up to a maximum height of 48 feet in accordance with the following provisions, if TRPA makes the findings required in Subparagraph (4) of this subsection.

- (1) Additional Height For View Corridor: Nine additional feet, up to a 12 foot increase in the maximum heights set forth in Table A, may be approved by TRPA for each 100 foot wide view corridor, or increments thereof in excess of 100 feet, provided as part of a tourist accommodation project. A view corridor, for purposes of this chapter, is defined as a view of Lake Tahoe from a major arterial which is unimpeded by buildings or other structures.*
- (2) Additional Height For Increased Setback: Nine additional feet, up to a 12 foot increase in the maximum heights set forth in Table A, may be approved by TRPA for each 100 feet, or increments thereof in excess of 100 feet, of permanent setback from the high water line of Lake Tahoe, provided as part of a project in addition to the otherwise required setback.*
- (3) Additional Height For Public Access: Nine additional feet, up to a 12 foot increase in maximum heights set forth in Table A, may be approved by TRPA for each 50 foot wide by 200 foot long area, or increments thereof in excess of 50 feet by 200 feet, of public access provided along the shore line of Lake Tahoe as part of a tourist accommodation project.*
- (4) Required Findings: Additional height may be approved under the provisions of Subparagraphs (1), (2), or (3) of this subsection, if TRPA makes findings (1), (2), (3), and (6) as set forth in Section 22.7.*

Guidelines:

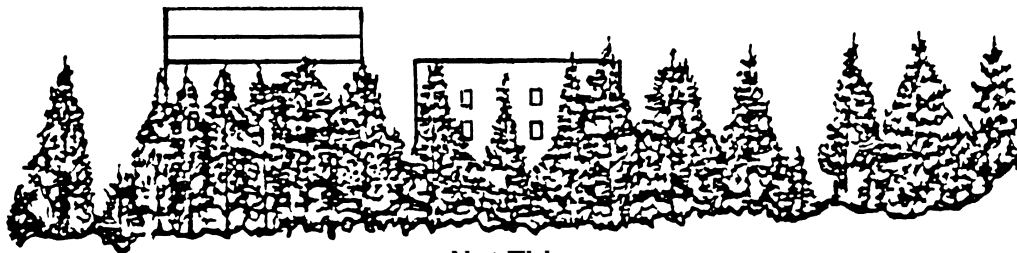
- (1) Maintain Building and Structure Heights Below the Forest Canopy.** The height of structures should not interfere with views of significant scenic features and should not exceed the height of existing forest cover in the vicinity. In most cases this means protecting the public or common view of the scenic features. In some instances you will affect a neighbor's view. The visual impact associated with building height can be mitigated and significant scenic backdrops can be protected by varying setbacks, stepping back upper stories, and maintaining view corridors that enframe views.

Structures that rise above the forest cover detract from the natural character of the environment because they are visible from viewpoints around the lake at great distances from the actual building site. Where possible, site the building on that portion of the site with the greatest screening ability in terms of vegetation or landform. Maintaining building heights at $\frac{2}{3}$ s to $\frac{3}{4}$ s the height of existing forest cover will limit the visual impact of a structure to the immediate site vicinity.



This

Buildings Approximately 2/3's to 3/4's Height of Tallest Trees



Not This

Buildings As Tall or Taller than Height of Tallest Trees

- (2) **Integrate Heights of New Buildings and Structures with Existing Development.** The height of new development should respect existing development patterns and avoid creating sharp contrasts with neighboring structures. If new structures are taller than adjacent development, carefully coordinated step-backs and variations in building height should be utilized to reduce sharp contrasts and provide visual interest.

Standard: 22.4.B

Height Standards For Structures Other Than Buildings: Except as provided for in Section 22.6, no structure, other than a building, shall have a maximum height greater than 26 feet.

Guidelines:

- (1) **Location.** Maximize use of vegetation screening when siting the structure. The visual magnitude of the structure from the road or from the Lake can be reduced when screened with existing or planted vegetation. Screening should be effective year-round.
- (2) **Color/Reflectivity.** Dark shades of earthtone colors (including black) with flat or matte finishes should be used on all surfaces in order for the structure to recede into the natural landscape. Where appropriate, surfaces of structures should be heavily textured using rough or articulated surfaces to minimize reflectivity. Earth tone colors should fall within the Munsell color ranges in Appendix G.[§]
- (3) **Height Relative to Tree Canopy.** Maximum structure heights should be limited to 2/3's to 3/4's of predominant tree canopy.

Bulk and Mass. Minimize bulk and mass of structure whenever possible. If not possible, orient the most massive views of the structure away from roadway or Lake viewing opportunities.

[§] Amended 11/20/02

Standard: 22.6

Additional Height For Certain Structures: The maximum height specified in Section 22.5 may be increased for communication towers, antennas, utility poles, special features of public safety facilities, ski lift towers, and other similar projects, excluding buildings and signs, up to the minimum height necessary to feasibly implement such projects. Additional height may be approved under the provisions of this section if TRPA makes findings (4) and (7) as set forth in Section 22.7.

Guidelines:

See guidelines above for Standard 22.5, and also guidelines for Standard 22.7, listed in Section 1. Site Design, Designing for Views.

C. BUILDING MATERIALS AND COLORS

Generally the widest variety of building materials and colors is appropriate in urban areas. Materials and colors used in urban areas may also reflect community values or traditions. A more narrow range of building materials and colors is appropriate in rural transition areas. In these areas context and setting should become increasingly important as design determinants. Structures in rural transition areas should use building materials and colors advantageously to help them achieve a high degree of apparent fit with the surrounding landscape. The narrowest range of materials and colors is appropriate in rural areas. In rural areas primarily design goals should be to preserve the appearance and form of the natural landscape while accommodating necessary structures. Natural building materials and dark-toned colors with flat finishes that fall within the Munsell color ranges in Appendix G [§]are strongly recommended.

Guidelines:

- (1) Exterior Materials.** Exterior building materials should be predominantly natural in appearance, such as wood or stone siding. Exterior building materials are encouraged to be genuine and not simulated. For reasons when simulated materials are used they should exhibit a convincing realism especially at corners, joints, and edges (i.e., turn the corner with simulated stone, giving depth to the façade). Genuine efforts should be made to use the simulated materials as if they were the real thing.

Texturing and coloring of concrete surfaces is encouraged. Exposed aggregate surfaces are generally more acceptable than concrete with a smooth finish. Concrete block or masonry unit construction which has no decorative texture or coloring should be veneered with a finish layer such as brick, stone, rock or wood. Aluminum, steel, plastic and plywood siding (not including board and batten) are not recommended.

- (2) Building Color.** Exterior building colors should be compatible with the surrounding natural and man-made environment, and not in competition with surrounding material elements for attention (i.e., building color should not become “signing” for the site). The use of earth tone colors should fall within the Munsell ranges in Appendix G is encouraged.

[§] Amended 11/20/02

- Urban. Generally, the widest variety of building colors is appropriate in urban areas; however, the use of earth tone colors are encouraged.[§] Primary colors or other bright colors should be used only as accents to enliven architecture, or as an integral component of a specific theme. It is important to remember that light-valued elements project forward against the dark greens and browns of the forest background, making them more visually prominent.
- Rural and Rural Transition Areas. The use of earth tone colors on exterior surfaces is strongly recommended in rural and rural transition areas. Earth tone colors are also recommended in situations where the goal is to blend the building into the natural landscape. If your design goal is to completely blend your house into the surrounding landscape, choose colors which are slightly darker than the colors of the surrounding vegetation and landforms. Earth tone colors are considered to be darker shades of reddish-brown, brown, tan, ochre, umber, sand and green. Certain hues of blue and gray can also function as earth tone colors, as can lighter hues of brown and sand when the building(s) is located in a granite-dominated setting. TRPA maintains a full-color catalog of the recommended colors at the TRPA offices.

Primary colors or other bright colors should be used as accents In rural transition areas such as on tr5im, or in conjunction with a specific theme. Primary colors and other bright colors are not recommended for use In rural areas. It is important to remember that light-valued elements project forward against the dark greens and browns of the forest background, making them more visually prominent.

Also see the guidelines in Section 2.B. Building Design.

D. HISTORIC BUILDINGS

Historic structures at Lake Tahoe are an important link with the past. Building styles are today being reproduced in attempts to return to a distinguished design theme. Steeply pitched roofs, deep covered porches, dormers, board and batten siding, window mullions, and rock wainscoating are among design elements which helped create the “Old Tahoe” building style. Many of these design elements are being revisited as the Region, as a whole, attempts to create a memorable impression as one of America’s finest destination resort areas.

Standard: 29.6

Projects Relating To Historic Resources: As part of the application for a project affecting designated historic resources, TRPA may require a report documenting compliance with the standards to this chapter. The report may be submitted to the applicable state's historic preservation office for review. Projects and activities affecting designated resources shall comply with the following standards:

29.6.A Additions: Additions to historic structures, adjacent to a historic structure, within an historic district, or on an historic site, shall be in compliance with subsection 29.6.D. Additions shall be eligible for the exceptions in section 29.7, if such construction is required to attain the objectives of that section. Provisions from the Design Review Guidelines may be required as conditions of approval.

29.6.B Repairs, Maintenance And Reconstruction: All repairs, maintenance, reconstruction, or other disturbance of designated historic resources shall comply with, and be maintained in accordance with, subsection 29.6.D. Provisions from the Design Review Guidelines may be required as conditions of approval.

29.6.C Demolition: Historic resources shall not be demolished, disturbed, or removed, unless TRPA finds that:

- (1) The action will not be detrimental to the historic significance of the resource;*
- (2) The action is pursuant to a recovery plan approved by the applicable state historic preservation officer; or*
- (3) It is the only feasible alternative to protect the health and safety of the public.*

29.6.D Construction, Reconstruction, Repair, And Maintenance Standards: Construction, reconstruction, repair, and maintenance of historic resources shall be in accordance with the U.S. Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

Guidelines:

Refer to The Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Copies of this document are available at the TRPA offices.

3. SETBACKS OF STRUCTURES

Setbacks of structures and other activities from the property line are traditional land use and site planning tools which serve several purposes. In commercial areas building setbacks should be utilized to create visual interest to allow for substantial landscaped areas, and to avoid the tunnel-like effects associated with strip development.

Standard: 30.5.D

Setback Standards: *The setback standards are:*

- (1) *For parcels abutting roadways rated in the TRPA's Scenic Resources Inventory, the minimum building setback from the right-of-way of such roadways shall be 20 feet. Decks (except decks for off street parking), stairs, canopies, building, or roof overhangs shall not intrude into the 20 foot setback established in this subparagraph. TRPA may approve building setbacks less than 20 feet if the reduced setback is approved by the appropriate local jurisdiction and TRPA finds that the project will not cause a decrease in the numerical ratings assigned to the roadway unit, including the scenic quality rating of the individual resources within each unit, as recorded in the 1982 Scenic Resources Inventory and shown in Tables 13-3 and 13-8 of the Study Report for the Establishment of Environmental Threshold Carrying Capacities, October 1982. The criteria for rating scenic quality as identified in the study report cited herein shall be used to determine if a project will cause a decrease in the numerical rating.*
- (2) *Buildings, other structures and land coverage shall be setback from SEZs in accordance with Chapter 37.*

Note: SEZ setbacks are listed in Appendix C.

- (3) *Other setbacks are set forth in Chapter 64.*

Note: Grading setbacks are listed in Section 1. Site Design and Appendix B.

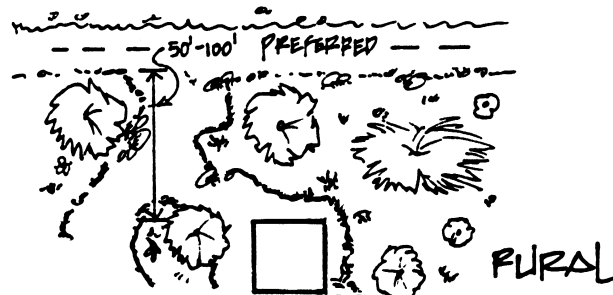
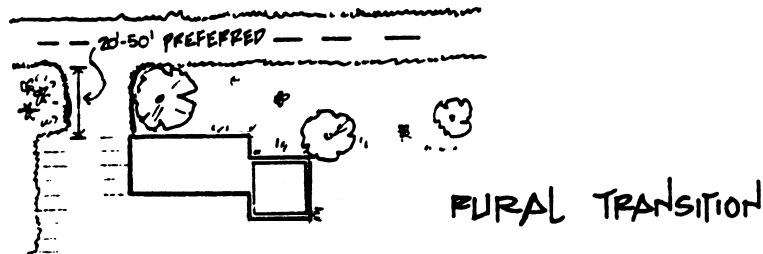
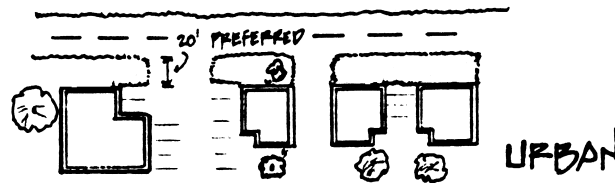
Guidelines:

A. COMMERCIAL SETBACKS

- (1) **Provide Variety.** Variety is encouraged in the setbacks and in the relationship of buildings to the street in order to reduce the sense of sameness which characterizes strip development.
- (2) **Relate Size of Project to Amount of Setback.** Projects with longer street frontages are encouraged to have generally larger setbacks.
- (3) **Coordinate Setbacks.** The setbacks for a project should be responsive to neighboring uses and appear coordinated to them.
- (4) **Reduced Setbacks Along Scenic Threshold Roadways.** This guideline only applies to situations where the proposed building or building addition is closer than 20 feet from the property line and is along a TRPA Scenic Threshold Roadway. Setbacks closer than 20 feet are generally discouraged. In scenic threshold roadway units which are in threshold attainment buildings proposed

closer than 20 feet may be approved when the proposed building is set back the same distance or greater than existing buildings along the same travel unit. Visual mitigation measures such as landscaping, building façade improvements, walkway installation, etc., may be required to offset the visual impact.

If a building is proposed to be set back closer than 20 feet along a scenic threshold roadway unit which is not in threshold attainment, the applicant first should review the visual assessment and recommendations for that unit. This information is located in TRPA's [Scenic Quality Improvement Program](#). If lack of setbacks is a significant problem in the unit, exceptions to the 20 feet setback generally will not be approved. If setbacks are not listed as a specific problem, visual mitigation measures such as those listed above may be required to offset the visual impact.



- (5) **Activities Within Setbacks.** Only landscaping, architectural features such as canopies or overhangs, structures housing mechanical or other utility equipment which are 3 feet in height or lower, driveways and signs should be located within front yard setbacks. Also see landscaped setback guidelines in Section 6. Landscaping. Local jurisdictions within the Region have differing requirements regarding what is allowed within setbacks. Please check these requirements before designing your project.

- (6) **Provide Landscaped Setbacks on Commercial Properties.** A landscaped buffer no less than 10 feet wide is recommended between the edge of the traveled roadway and building facades in order to provide a sense of separation between the roadway and pedestrian areas. Placement of pedestrian walkways between the landscaping and the building is preferable to placement along the street edge. Landscape treatments should be compatible with snow removal techniques.

In commercial areas such as Kings Beach and other Placer County communities, where existing development is set close to the roadway (10 foot or less setback) and structures are relatively small in scale, it may be desirable to maintain minimal building setbacks to preserve a more intimate pedestrian scale for the area. This would only be appropriate if new development maintained a similar scale, if pedestrian facilities are provided, and if parking along the frontages of structures (both on- and off-street) was removed or restricted.

B. RESIDENTIAL SETBACKS

- (1) **Residential Setbacks.** In non-commercial areas, the purpose of building setbacks should be to minimize the visibility of development from adjoining travel corridors. The setback may permit a densely planted buffer of native vegetation to be maintained along the roadway. Such a buffer should respect and attempt to maintain significant views of natural features or other scenic elements.

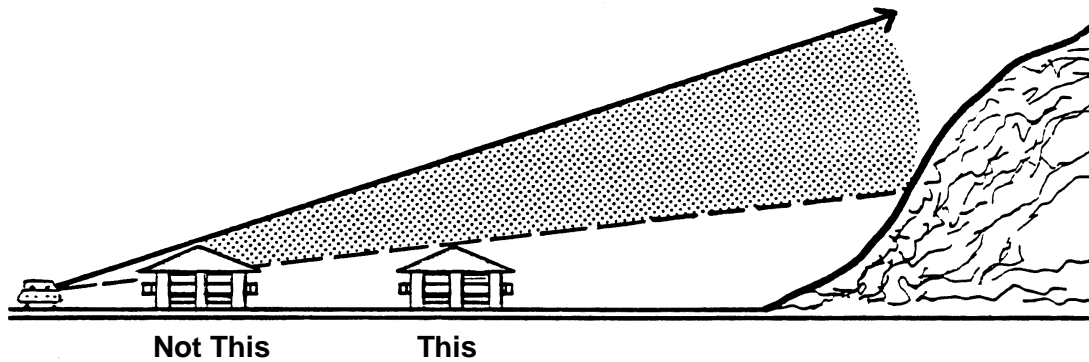
Residential units that direct access off major travel routes should be set back as far as possible. Deeper setbacks along major travel routes will also permit the preservation of views from the roadway. In many cases this guideline conflicts with minimum coverage regulations because longer driveways to serve the residences take up additional coverage. Since no coverage overrides for deeper setbacks are provided, this conflict must be resolved on an individual basis.

Front yard setbacks for residential development along threshold routes must meet the minimum twenty (20) feet setback from the road right-of-way. Garages, decks, and stairs should not include into the front yard setback.

As much as possible, existing mature, natural vegetation (especially tree cover) located in the front setback should be preserved. To insure effective screening, additional native trees (species should be selected from TRPA's Recommended Native and Adapted Plant List and should be compatible with existing native species in surrounding area) should be introduced so that trees are spaced at an average of 20 feet on-center minimum and at least two rows deep.

- (2) **Subdivision Frontages.** Residential subdivision frontages along major travel corridors should use a combination of existing vegetation, setbacks of structures, and landscape screening so that they are not readily visible from major travel corridors (i.e., average setback of 200-25- feet from roadway).

Subdivision entrances should be designed to provide safe, efficient, easy-to-identify access points, while also creating a positive first impression that is compatible with the surrounding natural vegetation. The location of existing vegetation and geological features should help determine the appropriate entry setting.



Encourage Deeper Setbacks to Preserve Views

4. **PARKING AND CIRCULATION**

The design of parking areas should be safe and accessible. Simple layouts which can be readily understood by motorists are advocated, especially in urban areas. Reducing the visual dominance of the automobile in the landscape while increasing opportunities for the pedestrian are important design goals addressed in this section.

A. PARKING AREAS

Standard: 24.2.C

General Standards: Driveways shall comply with the following standards:

- (1) *New driveways shall be designed and located so as to cause the least adverse impacts on traffic, transportation, air quality, water quality, and safety.*
- (2) *Shared Driveways: In the application of Subsections 24.2.D through 24.2.F, inclusive, TRPA shall encourage shared driveways if TRPA finds that the effect is equal or superior to the effect of separate driveways.*

Guidelines:

- (1) **Driveways.** The number of driveways from parking areas onto the main (i.e. frontage) roadway should be kept to a minimum. Whenever possible parking lot entrances should face side streets. Owners of adjoining properties are encouraged to develop shared points of ingress and egress in order to reduce the number of access points onto the main roadway.

Parking areas placed at rear of buildings and side access are preferred. Landscaping should be planted around the perimeter and on the interior of parking areas.

Standard: 30.5.B

Standards For Commercial, Tourist Accommodation, Public Service And Multi-Residential Projects: In addition to the other standards in this section, the standards for commercial, tourist accommodation, public service and multi-residential projects are:

- (1) *Onsite parking areas shall be provided with landscaped perimeters. Onsite parking areas greater than 1/4 acre in size shall be provided with landscaped islands designed in accordance with the Design Review Guidelines.*

Guidelines:

Also see Section 6. Landscaping for additional parking area landscaping design standards and guidelines.

- (1) **Provide Landscaping.** Parking areas should not visually dominate a project. Plant materials, earth berms, and low walls and fences should be used to reduce the visual prominence of parking areas while still providing adequate visibility for customers and security. A minimum screen 3 feet high is recommended.

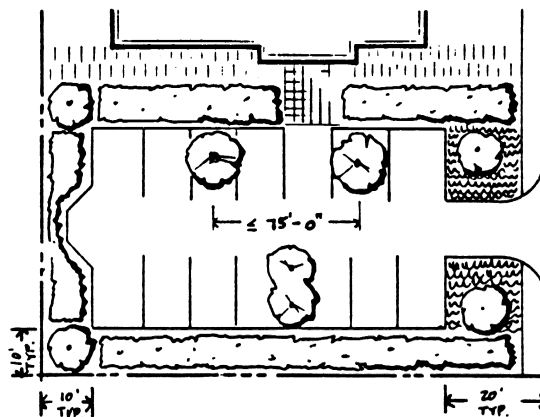
Maintain at least a 3-foot wide planting bed in all cases in order to give plants the opportunity to become established and mature. A wider planting bed (5-6 feet minimum) is recommended for areas where roads or driveways abut the building bed.

- (2) **Landscaped Perimeter.** Where appropriate, consider installing a joint landscaped perimeter parking screen with adjoining properties. A joint project offers the opportunity to share the cost of the improvements while creating a more substantial screen should be required around the entire perimeter of the parking area, with 10-foot minimum width landscape strips along nonfrontage sides and 20-foot minimum width landscape strips along frontage roads. Trees should be planted at intervals of no greater than 40 feet on center around the perimeter of the parking area. Hedges are appropriate in urban areas. Step down landscaping near entrances in order to maintain safe sight distances.

- Rural Transition. Landscaping of parking areas in rural transition areas should primarily consist of native vegetation in its natural forms (i.e., not formal hedges or hedge rows). Use low walls or changes in grade to assist in screening. Step down landscaping near entrances in order to maintain safe sight distances.
- Rural. See Rural Transition guidelines above.

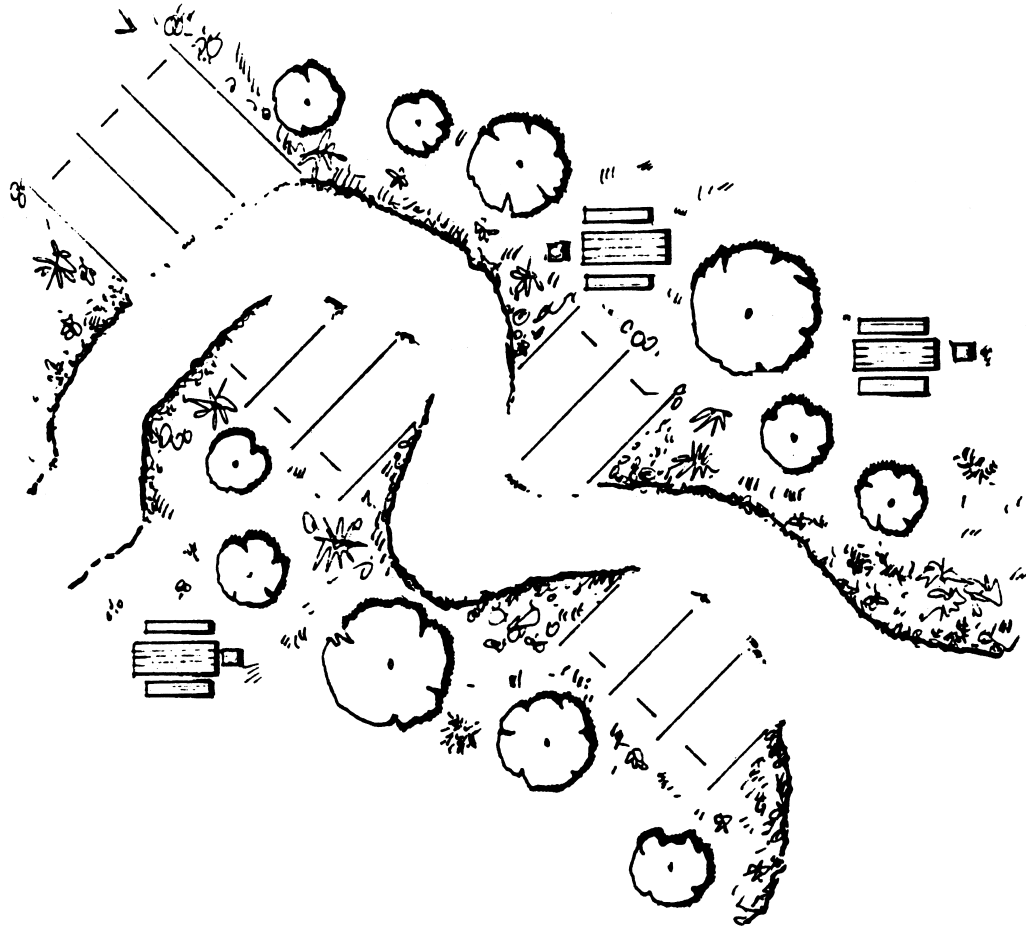
- (3) **Landscaped Islands.** Provide landscaped islands within parking areas as a means to break up the visual dominance of parked vehicles. Landscaped islands allow the retention of significant existing vegetation, while providing opportunities to add additional landscaping. Existing vegetation, especially large trees, will benefit from pervious planting beds above root systems. Vegetation in landscaped islands must be adequately protected from vehicle damage by such methods as curbing, tree wells, changes in grade, boulders and other parking barriers.

- Urban. Landscaped islands should also be provided within the interior of parking areas to break up expanses of pavement and screen parked vehicles. Parking areas should be divided into bays not exceeding 75 feet in length with landscaped buffer strips between bays. Tree planting on the interior of the parking area should be provided at an average ratio of at least one tree per four (4) spaces.



Provide Landscaped Islands

- Rural Transition and Rural. Use the existing vegetation pattern as a design determinant in laying out the parking area. In rural transition and rural areas, the design goal should be to fit the parking layout into the landscape rather than create a very formal and repetitive layout using one island every eight spaces.



Rural Transition and Rural Parking Layout

- (4) **Maintain Sight Distances.** In order to allow drivers safe visibility at intersections of driveways and streets, no obstruction in excess of two feet high be placed within a triangular area formed by the street and driveway at property line and a line connecting them at points 25 feet from their intersection. Trees pruned high enough to permit driver visibility may be permitted (both on- and off-street) was removed or restricted.

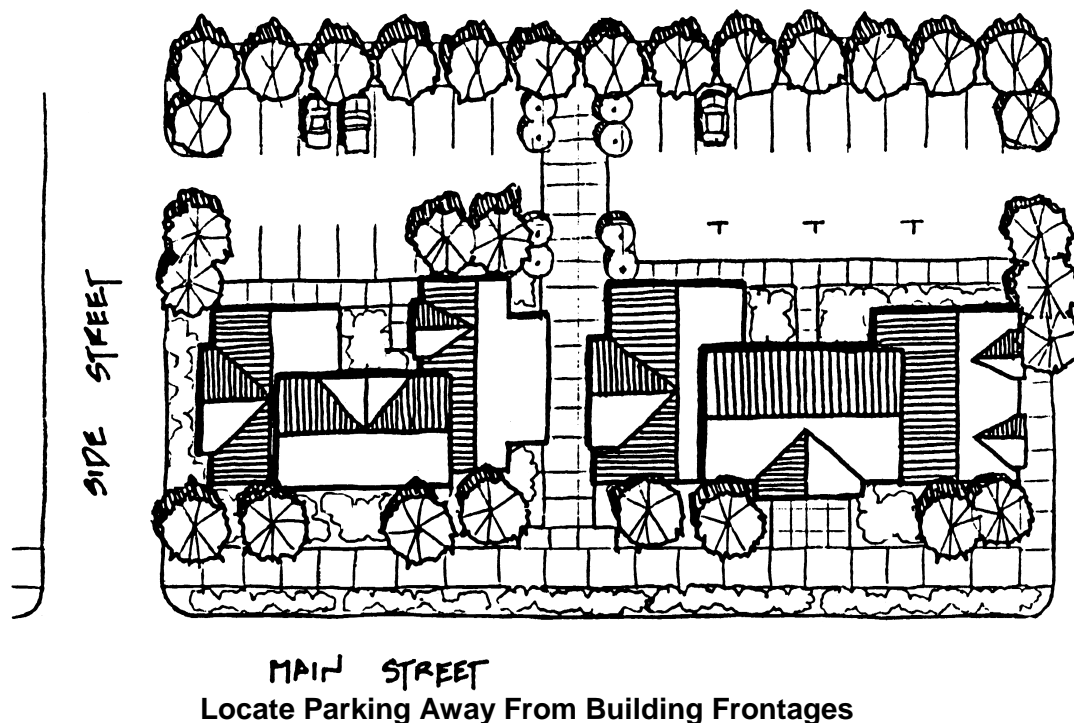
NOTE: No specific parking standards have been adopted by TRPA. Please refer to the parking standards of the local jurisdiction in which the project is located. Parking guidelines provided in this section are advisory only.

Guidelines:

- (1) **Location of Parking.** A major scenic goal within the Lake Tahoe Basin is to reduce the visual impact associated with the automobile. Toward this end, parking in commercial areas should be located away from building frontages and the main roadway whenever possible.

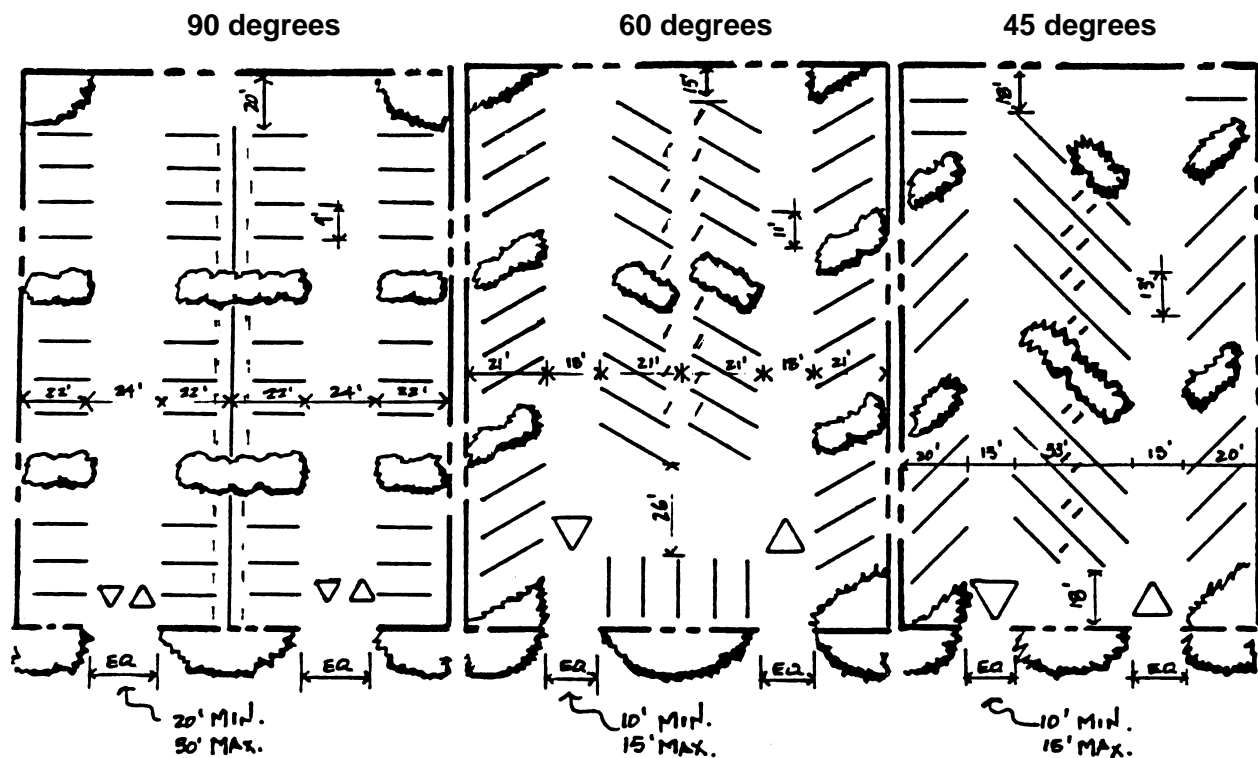
It is preferable to have parking areas located in back or side yards where the parking can be more efficiently screened by buildings and landscaping. This also helps establish a stronger architectural edge along the travel corridors when cars are not parked between the viewer and the building.

In areas where commercial development backs directly onto the lakeshore, it may be preferable to maintain the area between the building and the lake free of parking.



- (2) **On-Street Parking.** In order to reduce the visual clutter and unpredictability along the edges of the major travel routes, on-street parking should be restricted along the state and federal highways (i.e., Highways 89, 28, 50, 207 and 267). In those areas where it is desirable to maintain on-street parking, it is recommended that on-street parking be accommodated in parallel parking bays. Each bay would be designed to hold a maximum of four (4) parked vehicles. Bays would be paved and clearly defined with curbing. An eight (8) foot wide minimum landscaped area should be required at the end of each parking bay (i.e., consecutive parking bays would have 16 feet of landscaped area between them).
- (3) **Parking Layout.** The following parking layout guidelines for urban parking areas are advisory only. Projects must meet the local jurisdiction's parking standards. Please refer to the parking standards in the jurisdiction in which the project is located before designing your project.

Angle (Degrees)	Total Width		Aisle Width	
	Space Width	One-Way	One-Way	Two-Way
90	9 feet	46 feet	24 feet	24 feet
60	11 feet	39 feet	18 feet	24 feet
45	13 feet	33 feet	13 feet	21 feet



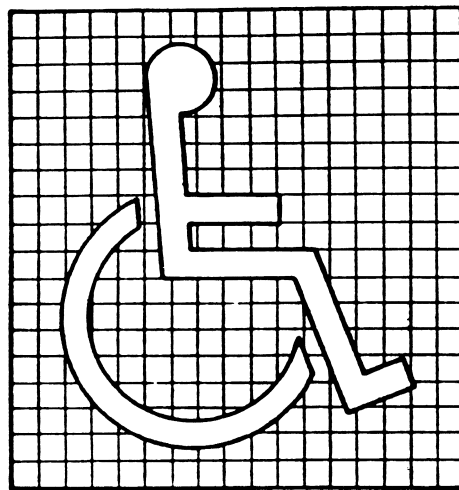
Recommended Parking Layouts

- (4) **Parallel Parking.** Parking space dimensions for parallel parking should be 9 feet by 22 feet. Aisle dimensions should be 12 feet for one-way aisles and 24 feet for two-way aisles.
- (5) **Stacked Parking.** Stacked parking areas are recommended only when vehicles are directed or parked by parking attendants. Dimensions for stacked parking spaces should be 8 feet by 16 feet. An aisle at least 12 feet wide should be maintained along the length of one side of the stacked parking area to allow for emergency access.
- (6) **Compact Vehicle Spaces.** Parking lots with 20 or more required parking spaces may design for a maximum 25 percent compact car spaces. Space width should be a minimum of 8 feet and space to curb length should be a minimum of 15 feet.

- (7) **Handicapped Parking.** Parking lots with 10 or more spaces should provide parking for the handicapped. One space should be provided for the first 30 spaces or fraction thereof. One additional space should be provided for each additional 50 spaces or fraction thereof.

Dimensions of handicapped parking spaces should be 12 feet by 18 feet. Access to and from the vehicle should be on level ground. Location of handicapped parking should be as near to the main pedestrian corridor or building entrance as possible.

Parking spaces for the handicapped should be clearly marked, both on the pavement and with a sign displaying the International Symbol of Accessibility. No recommendation contained in this paragraph will replace or supercede any federal, state, or local requirements for the provision of accessible parking for the handicapped.



(a)
Proportions



(b)
Display Conditions

Provide the International Symbol of Accessibility

- (8) **Delineation of Parking Areas.** Considerable visual confusion and clutter results from the uncoordinated parking that occurs in poorly defined and unpaved areas along the shoulder of the roadway. All parking areas should have clearly defined boundaries and should be striped to indicate location of spaces within the parking lot. The parking lot should be maintained to ensure that striping remains clearly visible.
- (9) **Provide Wheel Stops.** Use wheel stops wherever needed to prevent automobiles from parking on dirt areas or landscape plantings, or from overhanging walkways. Wheel stops should be placed approximately four feet back from the edge of landscaping to allow for bumper overhang. Commonly used types of wheel stops include precast concrete units, landscape timbers, and railroad ties which are staked into the ground. Bollards may also be used. Wooden bollards should be used rather than steel poles. No setback for bumper overhang is needed when using bollards.

- (10) **Sloped Parking Areas.** When parking is sited on sloping terrain, terrace the parking lots to follow the terrain rather than allowing the lot surface to extend above the natural grade.



Terrace Sloped Parking Areas

B. ON-SITE CIRCULATION

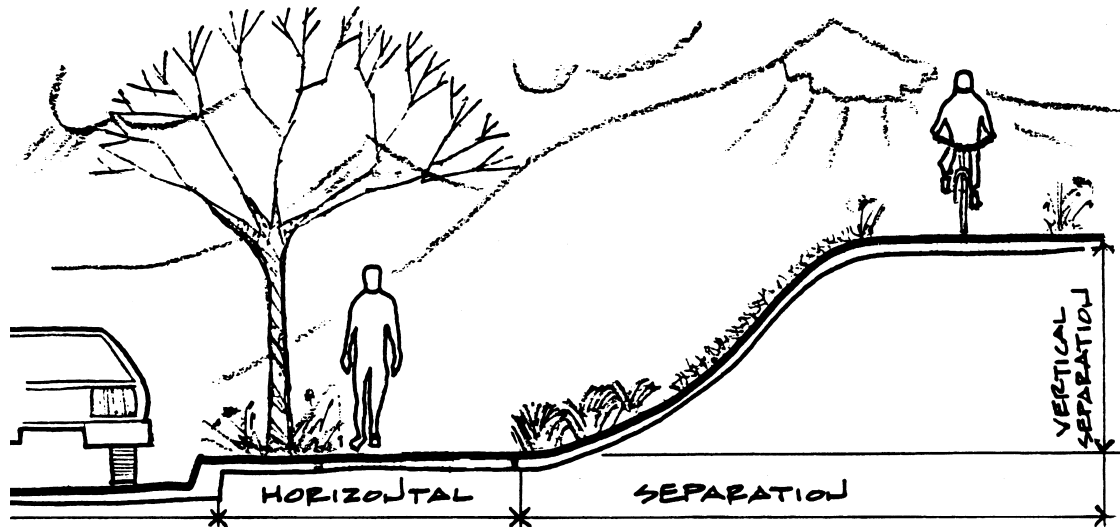
Standard: 30.5.B(2)

A pedestrian circulation system shall be incorporated into the site plan to assure that pedestrians can move safely and easily both on the site and between properties and activities within the neighborhood year round.

Guidelines:

- (1) **Elements of Pedestrian Environments.** Provide elements which will contribute to an attractive pedestrian environment including:
 - Destinations which can be reached on foot;
 - Pedestrian-scaled signage and other information;
 - Elimination of barriers and obstacles to continuous movement;
 - Protection from inclement weather; and
 - Clearly marked pathways or walkways of adequate width.
- (2) **Provide Pedestrian Amenities.** Provide pedestrian amenities which will encourage people to walk such as:
 - Street furniture;
 - Outdoor cafes;
 - Pedestrian plazas;
 - Window shopping opportunities;
 - Outdoor entertainment.
- (3) **Provide a Comprehensible Circulation Pattern.** The circulation pattern should be easily comprehended by the user.

- (4) **Separate Circulation Modes.** Separate vehicular and pedestrian circulation systems should be provided in order to reduce conflicts between pedestrians, bicyclists, and motorists. Separation can be effected through the use of changes in grade, materials, screens, and structures.



Separate Circulation Modes

- (5) **Anticipate Movement Patterns.** Layout of sidewalks should follow the anticipated movement of pedestrians. Failure on the part of the designer to anticipate these patterns often results in the creation of informal “people paths” which can lead to vegetation destruction and increased soil erosion.
- (6) **Separate Loading Activities.** Loading activities should not interfere with other site circulation patterns. This often means locating most loading activities to the rear or side of the site.
- (7) **Clearly Mark Building Entries.** Building entries should be clearly visible from the parking areas and should be kept clear of parking.
- (8) **Use Compatible Paving Materials.** Paving materials should be compatible with other site materials. Sidewalk surfaces should be non-slippery.

Standard: 30.5.B(3)

Adequate access shall be provided for emergency vehicles and for those persons attempting to render emergency services.

Guidelines:

- (1) **Provide Site Access Options.** Provide at least two points of access to the site whenever possible. This increases the options of fire and safety personnel to reach a site during an emergency. Service drives can serve this purpose if access to the building is available. A secondary access point need not always be a road or drive. Grasscrete or even turfgrass lawn open to a public street can be used as emergency access.

- (2) **Provide Minimum Driveway Widths.** Provide at least the minimum driveway width as defined in Section 24.2.E of the Code of Ordinances.
- (3) **No Parking in Driveways.** Discourage parking in the driveway.
- (4) **Maintain a Clear Aisle.** In areas of stacked parking, maintain an aisle clear of vehicles at least 12 feet wide along the length of one side of the stacked parking area.

5. SNOW STORAGE

Accommodating snow removal and storage presents unique challenges to site planning and design. During snow months, roofs, parking areas, and walkways become areas which need to be cleared of snow for safety and convenience. When snow is not disposed of offsite, provisions need to be made to store the snow on site. One consideration in planning for snow storage is the ability to meet surface water discharge standards.

Standards: 30.5.C and 81.3

Standards For Snow Storage: The standards for snow storage are:

- (1) *Parking areas shall be sloped at least two percent to prevent ponding and icing.*
- (2) *Commercial, tourist accommodation, public service, recreation and multi-residential projects shall provide, within the project area, snow storage areas of a size adequate to store snow removed from parking, driveway and pedestrian access areas or have arrangements by means of recorded easements or equivalent arrangements to remove and store accumulated snow offsite.*

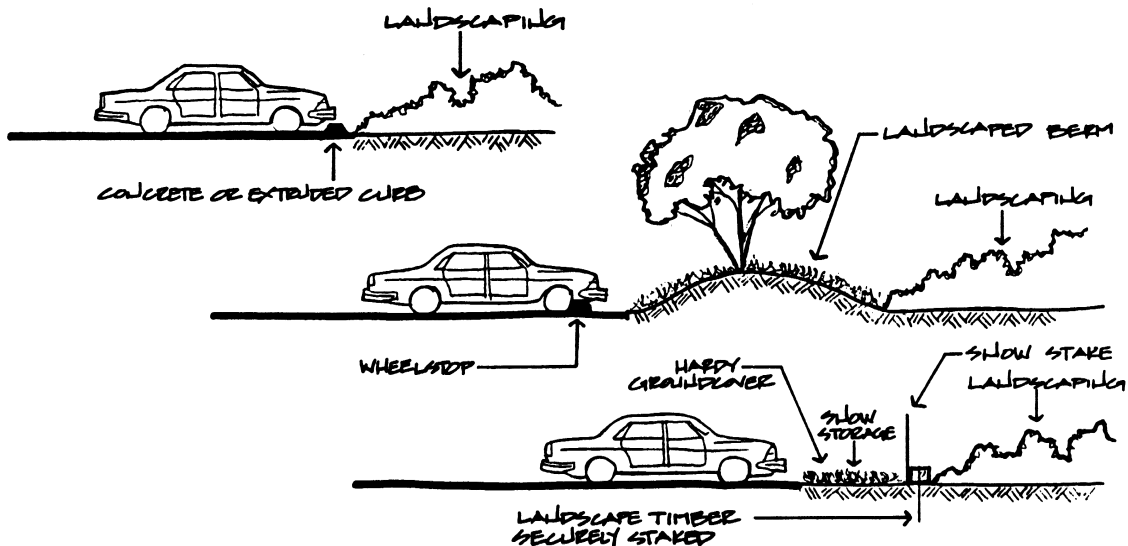
Snow Disposal: All persons conducting public, commercial or private snow removal or disposal operations shall dispose of snow in accordance with site criteria and management standards in the Handbook of Best Management Practices, the Design Review Guidelines, and the criteria below:

- A. Requirements For Individual Parcels: Removal of snow from individual parcels shall be limited to structures, paved areas, and unpaved areas necessary to safely park or provide safe pedestrian access.
- B. Requirements For Dirt Roads: Snow removal from dirt roads is subject to regulation pursuant to Chapter 9. When TRPA approves snow removal from a dirt road, pursuant to project approval or in accord with provisions of Chapter 9, it shall specify required winterization practices, BMPs, the specific means of snow removal, and a schedule for either paving the dirt road or ceasing snow removal.

Guidelines:

- (1) **Provide Snow Storage Areas.** All parking areas, whether on- or off-street, should be designed to accommodate snow removal maintenance procedures. Wherever possible, locate storage areas away from public views and visually sensitive areas (e.g., at the rear of the property, screened by the buildings, etc.) Do not locate storage areas or dispose of snow (i.e., blowing or plowing) in drainage channels, swales, or direct any untreated meltwater runoff into surface waters. Provide infiltration systems in the storage areas consistent with the Handbook of Best Management Practices.
- (2) **Storing Snow on Pavement.** The paved surface of the parking area may be used to store snow when deicing compounds (especially salt) are used on the pavement. This will prevent damage to landscaped areas by the deicing compounds. Storing snow on impervious surfaces generally requires the installation of infiltration trenches, dry wells, or other drainage conveyance system. Periodic maintenance of the snow storage area will be necessary to remove accumulated debris and road sand.

- (3) **Storing Snow on Landscaped Areas.** Landscape and planting beds around parking areas may be used for snow storage, especially when no chemical deicing compounds (not including sand) are used on the parking surface. Infiltration systems consistent with the Handbook of Best Management Practices may be necessary. Storage areas may also be constructed in landscape areas using a 12" layer of crushed rock or gravel for infiltration. A shallow layer of wood mulch may be used on top of the crushed rock in order to screen it. Avoid directing runoff from the storage area toward any drainage channel or swale. Periodic maintenance of the snow storage area will be necessary to remove accumulated debris and road sand.
- (4) **Define and Protect Landscaped Edges.** Edges of landscaped areas adjacent to roadways and parking areas should be delineated with reinforced curbing, large rocks or boulders, timbers, berming, or other grade changes. The edge materials used should be compatible with snow removal techniques in order to protect plant materials from snow plows and other vehicles. The perimeter of all plowed areas should be marked during the winter with snow stakes in order to protect existing vegetation. Edges of landscaped areas which are delineated with materials like those mentioned above can also function as permanent vehicle barriers.
- (5) **Pave Dirt Roads and Parking Surfaces.** Paving existing dirt roads, walkways, and parking surfaces will prevent the unintentional plowing and moving of dirt when snow plowing.



Define Parking Lot Edges

6. LANDSCAPING

Landscaping can be used to successfully integrate the built environment into the natural environment. It can also provide pleasant outdoor spaces for people, mitigate noise and air quality impacts, and help screen undesirable elements. Regional climatic and physiographic conditions generally impact landscape and plant materials, and must be taken into account early in the design process. It is recommended that landscape design and planning take advantage of the different visual environments in formulating a design theme or concept. Because the TRPA Code contains very few landscape standards, this section focuses primarily on guidelines.

Standard: 30.7

Landscaping Standards: *The following landscaping standards shall apply:*

- A. *Plant Species Permitted:* *Plant species on the TRPA Recommended Native and Adapted Plant List shall be used for lawns and landscaping.*
- B. *Minimum Plant Sizes And Spacings:* *For projects other than single family home projects, the following sizes and spacing shall be required for woody plant materials at time of planting:*
 - (1) *Trees shall be a minimum six feet tall or 1 1/2 inch caliper size or diameter at breast height;*
 - (2) *Shrubs shall be a minimum three gallon pot size where: upright shrubs have a minimum height of 18 inches and minimum spread of 18 inches; and, spreading shrubs have a minimum spread of 18-24 inches.*
 - (3) *Groundcovers shall be a minimum four-inch pot size or one gallon container and shall be a maximum 24 inches on center spacing.*
- C. *Accent Vegetation:* *Plant species not found on the TRPA Recommended Native and Adapted Plant List may be used for landscaping as accent plantings. Such plants shall be limited to borders, entryways, flowerbeds, and other similar locations to provide accents to the overall native or adapted landscape design*

Guidelines:

- (1) **Establish a Design Concept.** Landscape plans should exhibit a design concept that provides more than a haphazard arrangement of plants. Plant materials should be utilized in a sensitive ordering which defines the site's spatial organization and function, relates to the buildings and structures, and incorporates the various site elements.
- (2) **Reinforce the Region's Natural Character.** In addition to adding aesthetic charm and interest to developments, the primary goal for landscape improvements should be to preserve and enhance the landscape character of the project site and vicinity. The natural landscape of Tahoe is not overly complex, and landscape designs should be clean and simple and should avoid looking overworked.

Introduced vegetation should be compatible with the existing landscape in scale and should reflect the physical properties such as form, line, color and texture of local plant communities. See also guideline (4), Integration with Setting.

- (3) **Existing Landscape Elements.** As much as is feasible, significant existing landscape elements should be preserved and incorporated into development and landscape plans. Elements such as mature trees, tree groupings, and rock outcroppings should serve as design determinants, and integrated into the plan as design features.

Landscape construction plans should show how the design has considered existing vegetation and site features, and what steps would be taken during construction to protect them. Vegetation protection practices during construction may be found in TRPA's Handbook of Best Management Practices.

- (4) **Integration with Setting.** Landscaped designs should attempt to integrate the project into the existing setting.

- Urban. In urban settings the landscape often functions as architecture or as a means to define spaces for use. The widest range of plant materials is appropriate in urban areas. Please also refer to the Accent Vegetation guideline in this section. Generally, new plantings should be arranged in natural-looking groups. Geometric layouts with evenly spaced rows of trees and other formal landscape patterns should be reserved for institutional and public service sites when a formal landscape is desired.
- Rural Transition. Development in rural transition areas often involves residential or small-scale commercial uses located in a relatively natural (although often disturbed) forested landscape. Generally, a more limited range of plant materials is appropriate in rural transition areas.
- Rural. In rural settings landscaping often provides the means to successfully place a structure or other development into the natural landscape. Generally, the most narrow range of plant materials is appropriate in the rural setting. The arrangement and type of plant materials used in landscape projects in rural settings should be compatible with and reflect elements of the natural landscape surrounding the site. Landscape plans should locate new plantings in such a manner that edges of the existing forest canopy are extended, and sharp distinctions between existing natural vegetation and introduced plantings are not evident.

- (5) **Quantity of Materials.** Plant materials should be installed in accordance with the size standards listed above. The desired quantity and spacing of plant materials should be sufficient enough so that a complete and somewhat mature appearing landscape will be achieved within two years of planting. The plant size standards listed in Section 30.7.B are intended to apply to landscaping projects for the type of projects identified therein, and not to erosion control/revegetation projects.

In both cases, it is possible to achieve the same desired density of plant materials using either fewer, larger plant materials or larger quantities of smaller materials. Several factors will come into play when selecting either approach, including: availability of stock, landscape budget, specific plant species to be used, opportunities for irrigation and maintenance, and time of planting – recent climatic conditions.

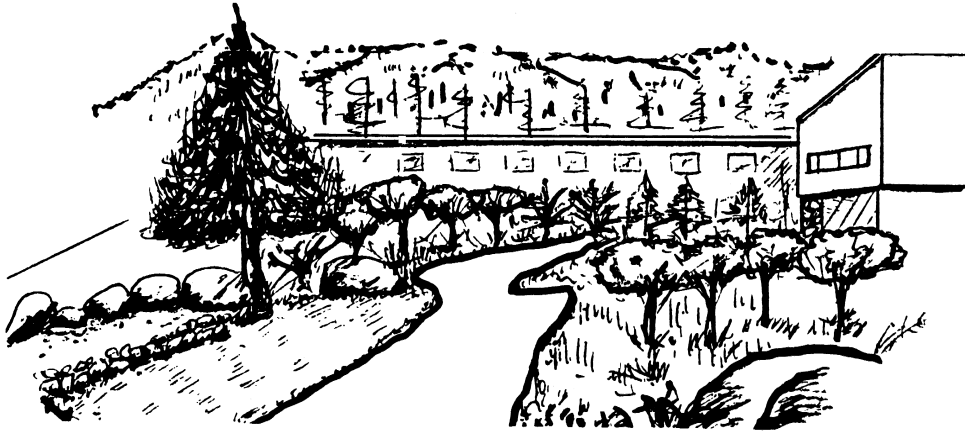
- (6) **Use of Accent Vegetation.** Accent vegetation is most appropriate in urban areas where the goal is to create dynamic spaces for people to assemble and interact. Accent vegetation is less appropriate in rural transition areas, however, it can be very effective as a landmark or identification of lanes, driveways, and project entrances as one approaches the built environment. Accent vegetation is rarely appropriate in rural areas.

When accent vegetation is used, it should be used sparingly, and limited to accent areas such as project entries, and small-scale pedestrian-oriented areas where more visual interest is desired. Accent vegetation should never be used in large quantities where it visually dominates a project. Selective use of a limited palette of accent plant materials is recommended. The use of ornamental turfgrass as an accent planting along major thoroughfares (Highways 50, 89, and 28) is not recommended.

- (7) **Functional Aspects.** Landscape improvements should be utilized to better integrate development with its surroundings by helping to reduce the apparent scale of structures, screening views of unsightly or non-essential elements, visually softening hard edges, and providing a transition between different use areas.
- (8) **Scale.** The scale and nature of landscape materials should be appropriate to the site and structures. Large-scale buildings should be complemented with large-scale landscape materials (i.e., plants, rocks, timbers, walls, fences, etc.) appropriate to the design character of the building.
- (9) **Landscaped Setbacks.** All structures should have a landscaped setback (either existing natural vegetation or introduced plantings) from any public roadway. The existing practice of having no landscaping between the façade of a structure and the roadway is unacceptable. The width of this setback should be proportionate to the scale of the development in terms of both the length of the frontage and the height and mass of the structures.

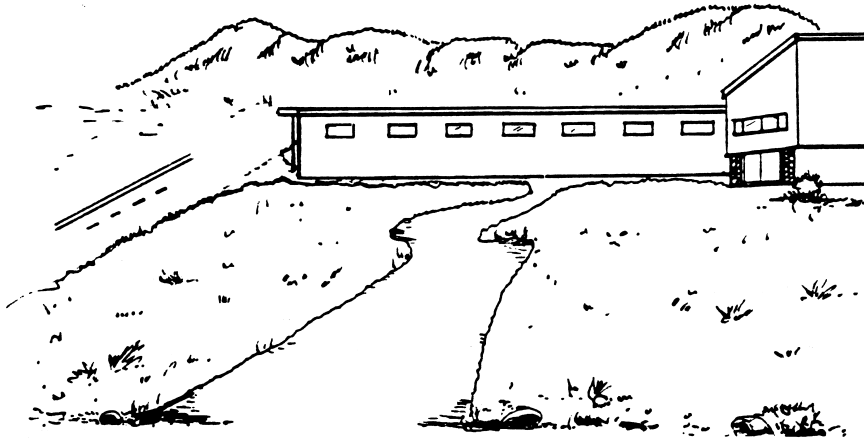
For new commercial developments the landscaped setbacks should not be less than twenty (20) feet deep. For existing development undergoing renovating/upgrading, this minimum may be difficult, if not impossible, to attain. In such cases, the maximum possible landscaped setback should be created, although it should not be less than ten (10) feet deep.

- Urban. Landscaped setbacks in urban areas should consider accommodating people as an important function. The entire setback up to the property line and where appropriate, up to the edge of the roadway.
- Rural Transition. Landscaped setbacks in rural transition areas can often be larger than those in urban areas. Primarily native vegetation should be used. Landscaped setbacks in rural transition areas should reflect the nature of the transition area, between urban and rural areas.
- Rural. Landscaped setbacks in rural areas should be as large as possible, incorporating native vegetation and setting the structure as far back into the property as possible in order to minimize the visual impact of the development.



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Provide Landscaped Setbacks



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- (10) **View Protection.** New landscaping shall not be located in such a manner that it would obstruct significant views, either when first installed or upon maturity. Where views exist, a conscious effort should be made to use plant materials to enhance them (e.g., tree clusters to “frame” view corridor; groundcovers or understory planting to improve foreground of significant view, etc.)
- (11) **Use a Limited Plant Palette.** Regardless of visual environment type, a limited palette of plant species is preferable for most projects.
- (12) **Recognize Plant Characteristics.** In addition to choosing plant materials that are compatible with the surrounding natural vegetation, the selection of plant materials should be based on their relative hardiness, drought and salt tolerance, year round interest (foliage, color, flowers, fruit, branching pattern, etc.) and function (e.g., screen, accent, shade, etc.) For example, deciduous vegetation would be inappropriate in areas where substantial year round screening is necessary. Plant materials that are well adapted to local condition, i.e., requiring minimal irrigation and fertilizers, are preferable.
- (13) **Provide Irrigation.** In order to establish newly installed plant materials and to protect significant investments in landscaping, automatic irrigation systems are strongly recommended for all Commercial/Public Service, Tourist

Accommodation and Multi-Family Residential projects containing more than four units. Certain Recreation projects such as parks, and golf courses are also encouraged to provide automatic irrigation systems.

- (14) **Using Fertilizer.** Fertilizer can provide many benefits to all types of landscape plantings. Because of its contents and effects, however, fertilizer use has become an issue in the Lake Tahoe Region. Current information suggests that fertilizer should be used only in certain places (not in stream environment zones) and for very specific purposes (plant establishment, annual feedings).

Above all, fertilizer should be used in a well thought-out and carefully controlled management plan. Generally, slow-release fertilizers are recommended for trees, shrubs, and ground covers other than grasses, while a minimal application of fast-release fertilizer is appropriate for grasses. This subject is discussed in greater detail in the Handbook of Best Management Practices and in TRPA's Guide to Fertilizer Use in the Lake Tahoe Basin.

- (15) **Leave Pine Needles.** It is recommended that in most cases fallen pine needles be left on the ground rather than to rake them up. The needles are a benefit to the natural landscape by serving many important functions including: erosion control, dust control, decomposing into fertilizer, retaining soil moisture (this is especially important in the establishment of new vegetation), and protection for plants, especially perennials. Care must be taken immediately around structures (up to 30 feet) in terms of not allowing large quantities of duff to build up, minimizing fire hazards and creating a defensible space. This subject is discussed in greater detail in the Handbook of Best Management Practices.

7. EXTERIOR LIGHTING

The functional objectives in providing exterior area lighting are to illuminate areas necessary for safe and comfortable use. In certain situations, area lighting can add to the aesthetic appeal of a site by highlighting architectural features of a building or illuminating pathways and landscape plantings. In these instances, only the special features of a building or landscape should be illuminated. It should be noted that the standards and guidelines contained in this section address area lighting on individual properties, and not overhead street lighting along public and private rights-of-way.

Standard: 30.8

Exterior Lighting Standards: In accordance with section 30.1, the following exterior lighting standards shall apply:

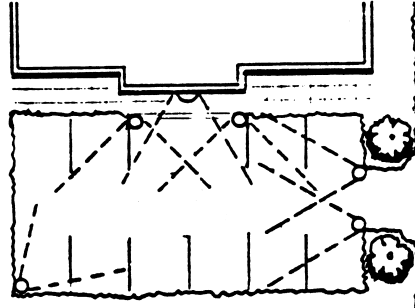
A. General Standards: The general standards are:

- (1) Exterior lights shall not blink, flash or change intensity. String lights, building or roofline tube lighting, reflective or luminescent wall surfaces are prohibited.*
- (2) Exterior lighting shall not be attached to trees except for the Christmas season.*
- (3) Parking lot, walkway, and building lights shall be directed downward.*
- (4) Fixture mounting height shall be appropriate to the purpose. The height shall not exceed the limitations set forth in Chapter 22.*
- (5) Outdoor lighting shall be used for purposes of illumination only, and shall not be designed for, or used as, an advertising display. Illumination for aesthetic or dramatic purposes of any building or surrounding landscape utilizing exterior light fixtures projected above the horizontal is prohibited.*
- (6) The commercial operation of searchlights for advertising or any other purpose is prohibited.*
- (7) Seasonal lighting displays and lighting for special events which conflict with other provisions of this section may be permitted on a temporary basis pursuant to Chapter 7.*

Guidelines:

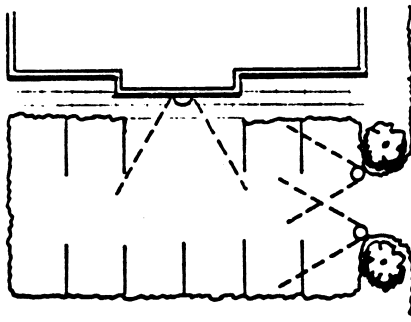
- (1) Lighting Design.** Exterior lighting should be designed as an integral part of the architecture and landscape and located in a manner that minimizes the impact of lighting upon adjacent structures and properties.
- (2) Lighting Levels.** Avoid consistent overall lighting and overly bright lighting. The location of lighting should respond to the anticipated use and should not exceed the amount of light actually required by users. Lighting for pedestrian movement should illuminate entrances, changes in grade, path intersections, and other areas along paths which, if left unlit, would cause the user to feel insecure. As a general rule of thumb, one foot candle per square foot over the entire project area is adequate. Lighting suppliers and manufacturers have lighting design handbooks which can be consulted to determine fixture types, illumination needs and light standard heights.

- Urban. Generally, urban lighting levels should be the highest of any areas in the Region. Lighting needs are usually greater in urban areas for safety, visibility, convenience and other needs. Walkways and building entrances should be the brightest areas. Overall bright lighting over entire parking areas is inappropriate.



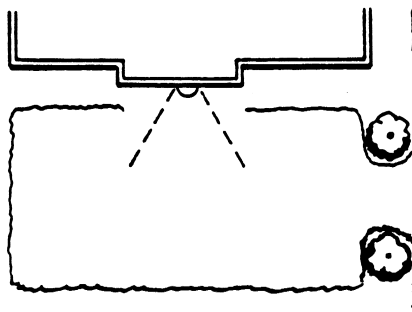
HIGH INTENSITY W/
MAXIMUM AMOUNT
OF LIGHTS

- Rural Transition. Moderate levels of lighting are appropriate in rural transition areas. Street intersections, walkways, building and parking entrances should be lit, however, parking areas generally do not need to be flooded with light.



MEDIUM INTENSITY
W/ MODERATE
AMOUNT OF LIGHTS

- Rural. Rural lighting levels should be the lowest of any areas in the Region. Generally, street and driveway intersections are the only areas requiring lighting. Minimal security lighting for structures, building and parking entrances in rural areas is acceptable.



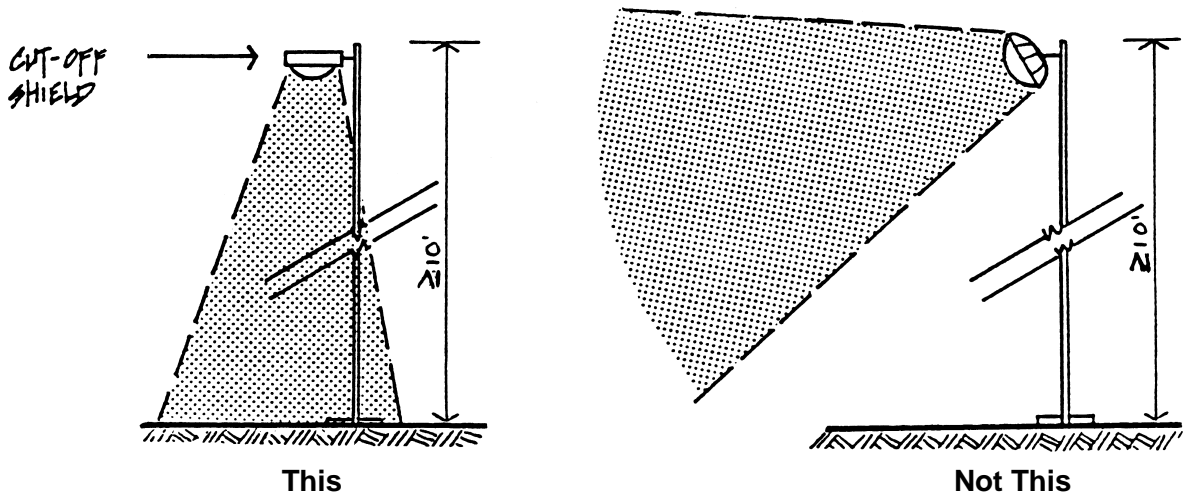
LOW INTENSITY W/
LEAST AMOUNT OF
LIGHTS
← DIRECTIONAL LIGHT

Provide Appropriate Lighting Levels

- (3) **Fixture Design.** Exterior lighting fixtures should be simple in design and should be well-integrated with other architectural site features.
- (4) **Structural Lighting.** Night lighting of building exteriors should be done in a selective fashion: highlight special recognizable features; keynote repeated features; or use the play of light and shadow to articulate the façade. The

purpose of illuminating the building should be to add visual interest and support building identification. Harsh overall lighting of a façade tends to flatten features and diminish visual interest.

- (5) **Lighting Height.** As a rule, the light source should be kept as low to the ground as possible while ensuring safe and functional levels of illumination. Area lighting should be directed downward with no splay of lighting directed offsite. The height of light fixtures or standards must meet the height limitations in Chapter 22. Direct light downward in order to avoid sky lighting. Any light source over 10 feet high should incorporate a cut-off shield to prevent the light source from being directly visible from areas offsite. The height of luminaires should be in scale with the setting and generally should not exceed 10-12 feet.



Use Cut-Off Shields on Light Fixtures

- (6) **Winter Seasonal Lighting Displays.** Winter seasonal lighting displays may be displayed in commercial or tourist plan areas only and should use miniature light strands which are neatly strung and securely attached to buildings, fences, shrubs, or trees. Any color of lights may be used; however, the lights should not be used to create advertising messages or signs (e.g., spelling out the name of a business is not permitted). Seasonal lighting displays should not blink or flash. Winter seasonal lighting displays should only be displayed between Thanksgiving and March 1 of the following year.



Recommended Seasonal Lighting Locations

SIGNS

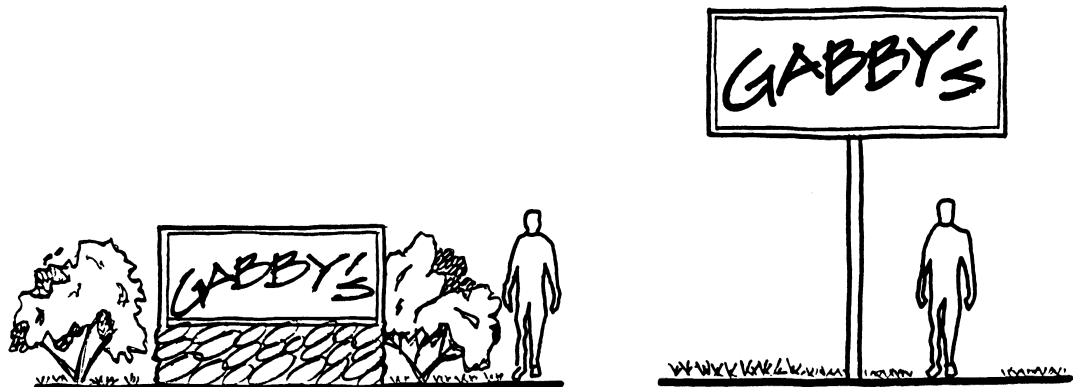
The primary purpose of signs should be to identify, and not to advertise. It is recognized, however, that as a tourist destination resort, competing objectives exist between preserving visual quality along the main travel routes and providing visitors with adequate information. The design of a sign should be simple and easy to read, and should contribute to, rather than detract from, the visual quality of the community.

Standards:

Specific sign standards are listed in the Code of Ordinances, Chapter 26, Signs.

Guidelines:

- (1) **Sign Design.** Sign design should conform to the architectural character of the building in terms of historic time period, style, location, size, configuration, materials and color. Signage attached to a building should be designed to be integral with the building and not obscure or conceal architectural elements. Standardized or corporate signing which does not relate to the building architecture is discouraged.
- (2) **Sign Area.** To reduce the visual competition between signs, sign area should be limited to the minimum amount necessary to identify the use. Total sign area permitted for each building can be divided for use in more than one sign. The use of a number of smaller signs rather than one larger sign is encouraged when it would not contribute to visual clutter and would more clearly identify the business.
- (3) **Internally Illuminated Signs.** Internally illuminated signs are discouraged, as is the use of plastic as the principal sign materials. Internally illuminated signs should only be used when just the individual letters and/or symbols are illuminated (i.e., the background is of a dark color, not translucent or illuminated) and illumination is of low intensity. However, the use of this type of signage is not encouraged for the Lake Tahoe Basin. Can type or cabinet signs with translucent backlit panels will be approved only if the panel is a dark color. Acceptable dark colors are listed in Appendix E of this manual, and generally include dark shades of red, green, blue, brown, gray, orange, violet, and black.

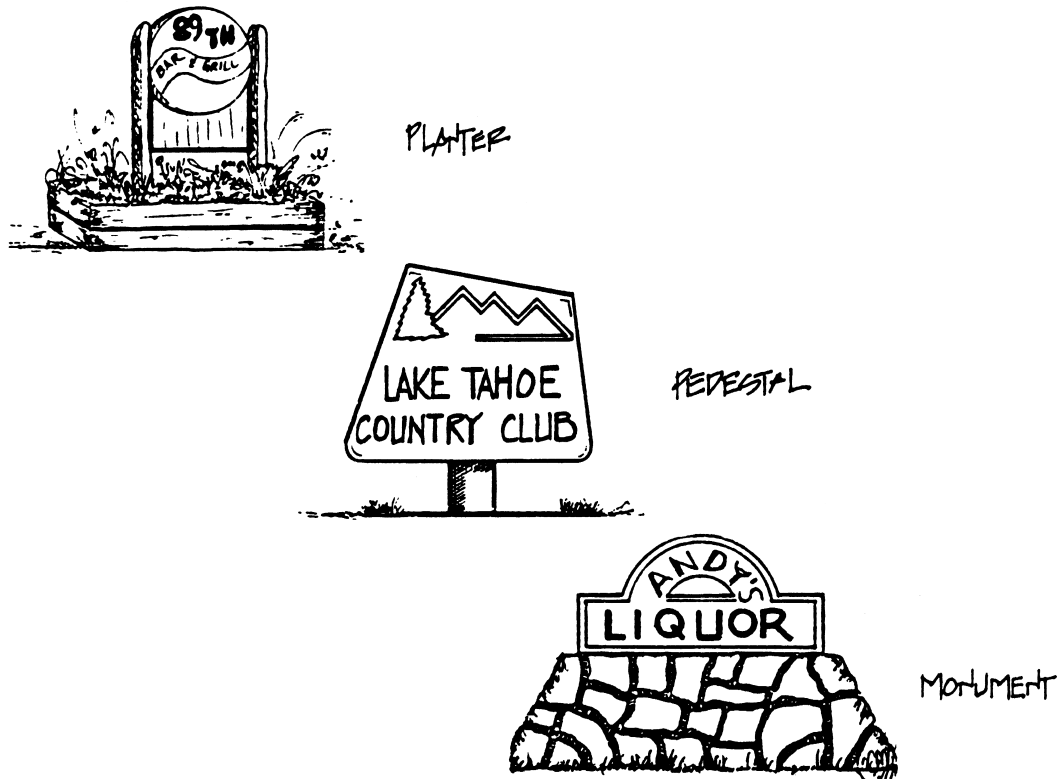


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Use Low-Profile Monument Signs

- (4) **Freestanding Signs.** Where permitted, freestanding signs should be low-profile monument signs. (The optimum sign height for viewing by motorists is approximately four (4) feet. Signage should be integrated with the landscaping and architecturally related to and compatible with the main structure. Additional sign height may be approved pursuant to Chapter 26 when a freestanding sign is incorporated into a landscape planter, pedestal or monument design. Examples of each type of design which would be approved for additional height are shown below. When additional land coverage associated with a freestanding sign base becomes a problem, the use of a freestanding sign pedestal shown below is recommended.



Freestanding Sign Types Eligible For Additional Height

- (5) **Color.** Bright colors are generally discouraged on signs except when used as accent colors. Sign colors on permit applications should be specified using the Pantone Matching System (PMS) standard color charts.
- (6) **Sign Location.** Architectural details of a building often suggest a location, size, or shape for a sign. Signage should complement the architectural features of a building.
- (7) **Develop a Coordinated Sign Plan for Multiple-Tenant Complexes.** Multiple-tenant buildings and complexes should develop a sign program that minimizes the potential visual conflicts and competition among tenant signs, yet insures adequate identification for each tenant.

Freestanding signs used to identify such complexes should include the name and address of the complex and not include the name of every tenant. Tenant identification should be provided by wall or projecting signs within the complex.



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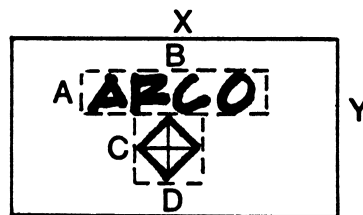
Signs Should Compliment Building Architecture

- (8) **Sign Lighting.** It is preferable the signs be externally illuminated. Both direct and indirect lighting methods are acceptable provided that the illumination is not harsh or unnecessarily bright. The light source for externally illuminated signs should be positioned so that light does not shine directly on adjoining properties, cause glare, or shine in the eyes of motorists or pedestrians.
- (9) **Projecting Signs.** Projecting signs other than pedestrian-oriented signs are not generally encouraged for the Tahoe Basin except in urban areas where the community plan calls for a smaller scale, pedestrian-oriented community character or within a multiple tenant complex. It is intended that projecting signs be small in size and preferably use a graphic depiction (rather than verbal) of the business or service offered. See Chapter 26 for specific regulations addressing pedestrian-oriented signs.
- (10) **Signs in Rural Transition and Rural Scenic Highway Corridors.** The back of any one-sided regulatory, directional, or informational sign located in a Rural Transition or Rural Scenic Highway Corridor should be painted or otherwise colored to closely match the color of the adjacent natural landscape.
- (11) **Maximum Area of Sign in Copy.** Signs should have no more than 60% of the sign area in copy. Sign copy includes all letters, numbers, characters, symbols and other graphics which are part of the sign. This guideline does not apply to signs which consist of individual letters, characters, or other symbols and which have no perimeter or border.

$$\text{Sign Area} = X \cdot Y$$

$$\text{Sign Copy} = (A \cdot B) + (C \cdot D)$$

$$\text{Sign Copy} < .60 (X \cdot Y)$$



Measuring Sign Copy

9. WATER CONSERVATION

Water conservation is accepted as a practical and economical water management technique. Water conservation measures increase water supplies, save energy, and save money. Residential water use includes water used indoors and outdoors. The largest share of that typically is used for landscape irrigation. Bathroom fixtures typically account for the largest share of indoor water use. Water-using fixtures and appliances have, in the past, been designed with little or no regard for water efficiency. Today's appliances, however, are designed with a greater sensitivity toward efficiency and are recommended. The guidelines in this section suggest ways to reduce water consumption without significantly altering lifestyles.

Standard: 30.9

***Water Conservation Standards:** The following appliances and fixtures shall be installed in new facilities or when replaced in existing facilities: low flow flush toilets; low flow showerheads (3 gpm rated maximum flow); faucet aerators; and water-efficient appliance (e.g., washing machines and dishwashers).*

Guidelines:

- (1) **Use Water Conserving Fixtures.** The following water conservation fixtures shall be considered appropriate to meeting Section 30.9, Water Conservation Standards.

Toilets – maximum 3.5 gallons per flush

Showerheads – maximum flow: 3 gallons per minute

Faucets – must contain either a pressure compensating aerator or a non-pressure compensating aerator with a low flow setting

Appliances – shall be water-efficient

Irrigation systems – shall be equipped with a moisture sensing device or automatic timer.

Note: The list of low-flow plumbing fixtures may also be found in TRPA's application packets.

- (2) **Design Landscape Irrigation Systems to Put Water Where it Counts.** The following guidelines are recommended when designing an irrigation system.

- (a) Incorporate low flow sprinkler heads.
- (b) Incorporate soil moisture sensing device or automatic timer in all irrigation systems.
- (c) Incorporate drip emitter heads for shrubs and trees.
- (d) Select low water usage plant materials, including drought tolerant turf grasses.
- (e) Develop and follow an irrigation schedule.
- (f) Water at night or early in the morning to minimize evaporation.
- (g) Optimize the use of irrigated turf grass.
- (h) Minimize the perimeter of turf grass area.

10. SCENIC HIGHWAY CORRIDORS

The Lake Tahoe Region offers many outstanding opportunities to view and photograph scenic resources. Many of these opportunities are available while driving around the Lake on the main highways (U.S. Highway 50, State Routes 28, 89, 207, 267 and 431, and Pioneer Trail). The highways listed are also travel routes used in TRPA's scenic quality thresholds. Maintaining and, in some cases, upgrading the scenic quality of the view from the road is the primary goal behind both scenic highway corridors and scenic quality thresholds.

Standard: 30.13.C

Scenic Highway Corridor Design Standards: All projects which are within the scenic highway corridors established in 30.13.A. shall meet the design standards listed in 30.13.C(1) and (2), in addition to other applicable design standards. All projects which are within the natural scenic highway corridor shall also meet the design standards listed in 30.13.C(3) in addition to other applicable design standards.

(1) Utilities:

- (a) *All new electrical lines which operate at 32 kilovolts or less, including service connection lines, shall be placed underground. Exceptions to this requirement may be allowed, provided TRPA finds that undergrounding would produce a greater environmental impact than above ground installation. If new electrical lines are permitted to be installed above ground, the new lines, poles, and hardware shall be screened from views from scenic highways to the maximum extent possible.*
- (b) *All new communication lines including telephone lines, cable television lines, and service connection lines, shall be placed underground. Exceptions to this requirement may be allowed, provided TRPA finds that undergrounding would produce a greater environmental impact than above ground installation. If new communication lines are permitted to be installed above ground, the new lines, poles, and hardware shall be screened from views from scenic highways to the maximum extent possible.*

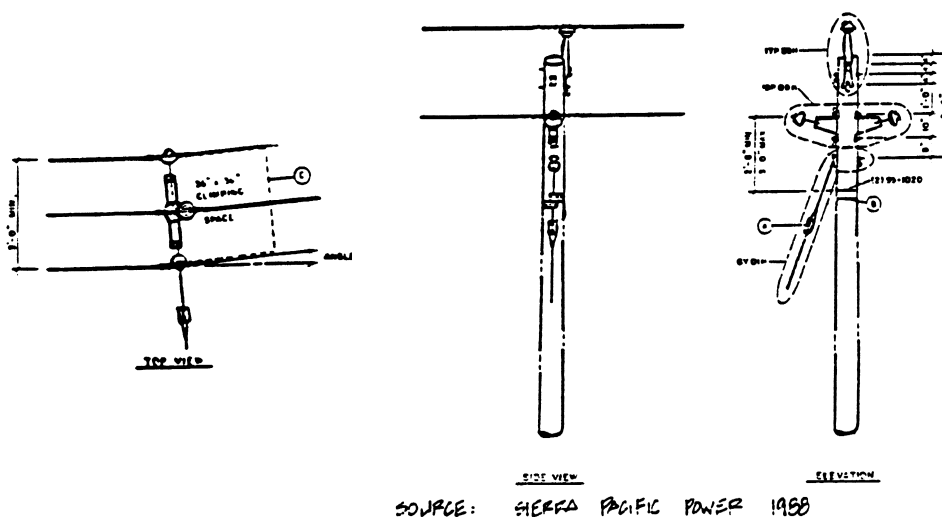
(2) Highway Fixtures: *Guardrails and other highway fixtures, including but not limited to, retaining walls, safety barriers, traffic signals and controllers, light standards, and other structures, shall be limited to the minimum length, height, and bulk necessary to adequately provide for the safety of the highway user. Earth tone colors of dark shades and flat finish shall be used on all highway fixtures. New and replacement guardrails shall not have a shiny reflective finish. Retaining walls and other erosion control devices or structures, shall be constructed of natural materials whenever possible and shall, to the maximum extent possible, be designed and sited as to not detract from the scenic quality of the corridor. Such structures shall incorporate heavy texture or articulated plane surfaces that create heavy shadow patterns. Adopted community plans may establish equal or superior standards for highway fixtures.*

(3) Siting of Development: *All projects, excluding signs, driveways, parking for scenic vista points, trailheads, and pedestrian/bicycle paths, shall be sited in such a manner that they are not visually evident from the scenic highway. All projects, when viewed from a distance of not less than 300 feet, should meet the*

Visual Magnitude/Contrast Ratings for Natural Scenic Highway Corridors established in Appendix D of the Design Review Guidelines.

Guidelines:

- (1) **Minimize Visual Impact of Utility Lines and Poles.** Site utility lines and poles out of the viewshed of the highway using one or more of the following methods:
 - (a) Use landform and vegetation to provide screening and visually absorb utility lines.
 - (b) Use dark colors with flat finishes which blend with the forest landscape on utility poles and all hardware or appurtenances. Utility lines should also be of a dark color.
 - (c) Run the lines and poles along a secondary street using the screening opportunities of existing structures and vegetation.
 - (d) Hang all lines vertically on one pole, thereby minimizing the visual mass associated with the horizontal crossbar. Sierra Pacific Power Company specifies pole design #ANG 32H on many projects in areas where snow unloading from the conductors is a problem. See the accompanying graphic.



Use Vertical 3-Wire System Poles

- (2) **Use Non-Specular Lines.** Whenever available, use electrical or other utility lines (conductors) which have a non-specular (non-reflective) finish. Where non-specular lines are not available for a particular application, use a substitute wire or cable which is coated with a black covering or other dark color, or has a non-reflective finish.
- (3) **Install and Maintain Plum Poles.** This is an often overlooked solution to remedy a visual eyesore. Make sure utility poles are installed and maintained plumb. Recognizing common construction practices, poles at angle points should be “raked into the angle” in order to maintain a plumb pole.
- (4) **Design of Highway Fixtures.** Consider the following design solutions when designing projects which include highway fixtures. Also see the Retaining Wall guidelines listed in Section 1. Site Design.

- (a) Use dark colors with flat finishes that have a Munsell color value of 4 or less and a chroma value of 4 or less[§].
- (b) Articulate plane surfaces to create shadow lines.
- (c) Wherever possible, use materials, rough textures or surfaces to create heavy shadow patterns.
- (d) Minimize reflective surfaces on all fixtures except directional and regulatory sign faces. Limit reflective surfaces to lettering and other graphics wherever possible (not including sign background).
- (e) Treat metal beam guard rails with a mild acid bath (vinegar) or equal process to dull the silver metallic finish. The use of corten steel for metal beam guardrails is encouraged over galvanized steel.[§]

Guidelines:

(1) Site New Development to be Visually Subordinate to the Natural Landscape. All new development when viewed at a distance including those things specifically excepted in 30.13.E(1) should meet the Visual Magnitude/Color Contrast rating for Rural Scenic Highway Corridors found in Appendix D of this manual.

- (a) Use landform and topography as a screen. This is especially effective in siting buildings and other structures. In mountainous landscapes numerous opportunities exist to hide structures behind small changes in landforms or topography.
- (b) Use vegetation as a screen. This is particularly important in screening as much of the perimeter of the structure as possible. Straight lines of buildings and other structures as often what makes them stand out in an otherwise natural landscape.
- (c) Blend the structure into the landscape by using appropriate colors. In most cases appropriate colors are dark shades or earthtone colors that fall within the Munsell color ranges in Appendix G. Flat finishes also help blend structures into the surrounding landscape.[§]
- (d) In some cases, road cuts for which retaining walls or other remedial erosion control measures are designed, consist of light colored soils. In these situations, light shades of earthtone colors may be appropriate in order to blend the wall or other solution into the landscape.



This



Not This

Use Landform or Topography to Screen Structures

[§] Amended 11/20/02

11. SHOREZONE

The shorezone of Lake Tahoe is a resource of regional significance. Site planning in the shorezone requires added levels of sensitivity on the part of the designer for many reasons, including visual interest in the land/water edge, sensitive ecological processes, the force and energy of wind and waves, and the visual vulnerability of shorelines. These guidelines focus on the design of man-made development as seen from the Lake.

Standard: 53.10

Design Standards Within The Shorezone: Design standards within the shorezone are as follows:

- A. Color: The color of structures, including fences, shall be compatible with its surroundings. Subdued colors in the earthtone and woodtone ranges shall be used for the primary color of the structure. Hues shall be within a range of natural colors that blend, rather than contrast, with the existing vegetation and earth hues. Earthtone colors are considered to be shades of reddish-brown, brown, tan, ochre, umber, sand and dark green.
- B. Roofs: Roofs shall be composed of non-glare earthtone or wood tone materials that minimize reflectivity.
- C. Fences: Wooden fences shall be used whenever possible. If cyclone fence must be used, it shall be coated with brown or dark green vinyl, including fence poles.

Guidelines:

- (1) **Site Structures Away From Open Prospects.** Use vegetation and landform to conceal structures from view of the Lake. There are many historical precedents for this at Lake Tahoe such as the Ehrman Mansion and the Tallac Estate. Siting structures at the ecotone (forest/shoreline edge) or further into the forest landscape can help minimize visibility and soften the structure's appearance. View corridors to the Lake can still be incorporated into the building and site design by careful siting of and by selective tree pruning or thinning. This can produce more dramatic framed views.



Site Structures Away From Open Prospects

- (2) **Use Colors Which Blend or Recede.** Use dark colors and flat finishes which blend rather than contrast with surrounding landscape to help minimize the apparent visibility structure.
- (3) **Use Vegetation to Screen Structures.** Using existing or planted vegetation to soften the structure's appearance from the Lake will help "fit" the structure into the landscape.
- (4) **Compatible Scale.** The scale of new development should be proportional with the scale of the surrounding vegetation and the screening ability of the vegetation.
- (5) **Minimize Reflectivity of All Structures and Surfaces Visible from the Lake or Adjacent Scenic Highway Corridors.**
 - (a) Use flat or matte finishes on all visible surfaces including walls and roofs.
 - (b) Articulate large glass surfaces, avoid large flat surfaces which face the Lake.
 - (c) Use non-glare glass.
- (6) **Protect Shorezone Vegetation.** Protect existing shorezone (backshore and foreshore) vegetation against disturbance or mechanical injury during construction activities by using temporary fencing or other barriers. See also the Handbook of Best Management Practices for additional measures.

Standard: 54.4

Piers: Where otherwise allowed pursuant to Chapters 51 and 52, the placement and design of piers shall conform to the following standards:

Design And Construction Standards: Design and construction standards are:

- (1) *The width of piers shall be a maximum of 10 feet, which shall include all appurtenant structures except for a single low-level boat lift and a single catwalk. A catwalk below the level of the main deck, and not exceeding three feet in width by 45 feet in length, may be permitted. Additional width for a single catwalk may be permitted where TRPA finds it is necessary to facilitate barrier free access but at no time shall the entire width of the pier and catwalk exceed 13 feet. A low level boat lift with forks not exceeding 10 feet in width may be permitted.*
- (2) *Pier decks shall not extend above elevation 6232.0 feet, Lake Tahoe Datum. Boat lifts, pilings, and handrails and other similar safety devices, shall not extend more than four feet above the pier deck. Pier decks may extend up to elevation 6234.0 feet in limited situations where TRPA finds that the additional height is necessary for safety reasons or that local wave characteristics represent a real threat to the integrity of the structure.*
- (3) *To permit free circulation of water, piers shall be floating, or shall be built on an open piling foundation, but in no case shall a pier be supported on a foundation that is less than 90 percent open.*
- (4) *Superstructures shall not be permitted.*

- (5) *Fueling facilities shall not be permitted on piers located adjacent to littoral parcels on which the primary use is residential.*
- (6) *The standards set forth in Subparagraph (1), above, may be waived for piers recognized by TRPA as multiple use pursuant to Section 54.8.*

Guidelines:

- (1) **Minimize Pier Cross Section When Viewed From Lake.** The pier design should result in a structure with minimal apparent mass or bulk. This includes boatlifts, pilings, fenders, handrails, signs, lighting, catwalks below piers, and other appurtenances. Floating piers may be considered as an alternative solution only when they will be protected from wind and wave action (i.e., in protected coves and bays, or behind breakwaters and jetties). Dimensions and material sizes should be limited to the minimum necessary to insure function and safety.
- (2) **Minimize Pier Profile When Viewed From Shoreline.** Consider the visual impact of the pier when viewed from along the adjacent shoreline. The pier design should result in a structure which does not appear bulky or massive, and does not obstruct views of the lake.
- (3) **Develop Multiple Use Piers.** Whenever possible, develop multiple use piers between adjacent parcels. This minimizes the overall number of shoreline structures, and helps maintain the natural character of the shoreline. The Code provides the ability to vary from certain design and construction standards in exchange for developing multiple use facilities, including piers.
- (4) **Minimize Use of Reflective Colors and Materials on All Structures Visible From the Lake or Adjacent Scenic Highway Corridors.** Use dark colors or colors which blend with the immediate background, and flat finishes.
- (5) **Use Single Pile Construction Technique.** Consider using single pile pier design and construction techniques rather than the traditional double pile construction. This can minimize the apparent mass of the pier. Whenever possible, use single pile design and construction for single-use residential piers. The use of single pile design will generally result in pier widths of approximately six feet.
- (6) **Pier Lighting.** Lighting the pier may be done to increase safety and visibility. Lighting should be provided to the minimum extent necessary, and should include the use of low-level lighting fixtures. Lighting should generally be directed downward and incorporate cutoff shields where necessary.

Standard: 54.5

Boat Ramps: *When otherwise allowed pursuant to Chapters 51 and 52, the placement and design of boat ramps shall conform to the following standards:*

Design And Construction Standards: *Design and construction standards are:*

- (1) *Boat ramps shall not exceed 10 feet in width.*
- (2) *Boat ramps shall be constructed from prefabricated materials. Metal grates or rails are the preferred construction material. Pre-cast concrete shall be permitted only when metal grates are infeasible.*

- (3) *The standard set forth in Subparagraph (1), above, may be waived for boat ramps recognized by TRPA as multiple-use pursuant to Section 54.8.*

Guidelines:

- (1) **Minimize Boat Ramp Cross Section When Viewed From the Lake and Shoreline.** Design the boat ramp using materials which do not appear bulky or massive. Use materials of minimum dimensions to insure function and safety. This includes walkways, handrails, signs, lighting, ramps and other appurtenances.
- (2) **Minimize Use of Reflective Colors and Materials on All Structures Visible From the Lake or Adjacent Scenic Highway Corridors.** Use dark colors or colors which blend with the immediate background, and flat finishes.

Standard: 54.7

Floating Docks And Platforms: Where otherwise allowed pursuant to Chapters 51 and 52, the placement and design of floating docks and platforms shall conform to the following standards:

Design And Construction Standards: Design and construction standards are:

- (1) *Floating docks and platforms shall not exceed an area of 100 square feet or a dimension along any side of 15 feet.*
- (2) *Floating docks and platforms shall not project more than three feet above the surface of a lake or other body of water.*
- (3) *Floating docks and platforms attached to a pier shall conform to the standards set forth in Subsection 54.4.B.*
- (4) *Superstructures shall not be permitted on floating docks or platforms.*
- (5) *The standard set forth in Subparagraph (1) above, may be waived for floating docks and platform recognized by TRPA as multiple-use pursuant to Section 54.8.*

Guidelines:

- (1) **Minimize Mass.** Design the floating dock or platform using materials which do not appear bulky or massive. Use minimum dimensions and material sizes to insure function and safety. Also see Pier guideline (1) in this section for additional recommendations regarding minimizing cross section.
- (2) **Minimize Use of Reflective Colors and Materials on All Structures Visible From the Lake or Adjacent Scenic Highway Corridors.** Use dark colors or colors which blend with the immediate background, and flat finishes.
- (3) **Lighting.** Lighting the floating dock may be done to increase safety and visibility. Lighting should be provided to the minimum extent necessary, and should include the use of low-level lighting fixtures. Lighting should generally be directed downward and incorporate cutoff shields where necessary.

Standard: 54.8

Multiple-Use Facilities: Where otherwise allowed pursuant to Chapters 51 and 52, the placement and design of piers, boat ramps, mooring buoys, and floating docks and platforms designed to serve individuals on a multiple- or commercial-use basis shall conform to the following standards. If any such structure is accessory to a marina, the provisions of Section 54.12 also shall apply.

Design And Construction Standards: Multiple-use facilities shall comply with the design and construction standards set forth in Subsection 54.4.B for piers, Subsection 54.5.B for boat ramps, Subsection 54.6.B for mooring buoys and Subsection 54.7.B for floating docks and platforms; except that, for facilities recognized by TRPA as multiple-use pursuant to Subsection 54.8.D, the design and construction standards set forth in Subparagraph 54.4.B(1), Subparagraph 54.5.B(1), and Subparagraph 54.7.B(1) shall serve as guidelines.

Guidelines: Please refer to the appropriate guidelines for piers, boat ramps, or floating docks and platforms listed elsewhere in this section.

Standard: 54.11

Jetties, Breakwaters, Rock Cribs And Fences: Jetties, breakwaters, rock cribs and fences may be permitted as follows:

- A. **Location:** Jetties, breakwaters, and rock cribs shall not be permitted in locations where beach erosion or loss of sediment from the shorezone is likely. Fences shall not be permitted lakeward of the high water line of any lake or body of water except to protect the health or safety of the general public or to protect property located adjacent to areas of public access to any such lake or body of water from trespass and provided such fences are approved by agencies having jurisdiction.
- B. **Design And Construction Standards:** The design, construction and maintenance of jetties, breakwaters and fences shall comply with the following standards:
 - (1) Except as provided in Subparagraph 54.11.B(2), jetties and breakwaters shall have openings which allow adequate free circulation of water and sediment.
 - (2) No jetty or breakwater shall be a solid or nearly solid structure unless TRPA finds that it will not interfere with littoral processes, cause shoreline erosion, or harm water quality or clarity and;
 - (a) The solid or nearly solid jetty or breakwater is a necessary part of a marina for which TRPA has approved a master plan; or
 - (b) The solid or nearly solid jetty or breakwater is necessary to protect the safety of persons using a public boat launching facility.
 - (3) The size, number and locations of openings in jetties or breakwaters shall be sufficient to avoid interference with littoral drift, shoreline erosion, harm to underlying land and harm to water quality and clarity.
 - (4) Fences in the nearshore or foreshore shall be at least 90 percent open and shall be maintained to be kept free of debris.

- (5) *Rock and other material for construction of structures permitted under this subsection shall not be obtained within the shorezone or lakezone in the region.*

Guidelines:

- (1) **Use Natural Appearing Materials.** Whenever possible, use rocks instead of sheet piling. Gabion baskets are not recommended unless used underwater only and then overlaid with rocks. Refer also to the Handbook of Best Management Practices.
- (2) **Keep Fences Above the High Water Line Whenever Possible.** Fences ending or running into the water are unsightly and seldom necessary. Appropriate signage can be used to discourage trespassing. A linear element in the landscape such as a fence should be resolved and ended on land and not in the water.
- (3) **Decks on Top of Jetties or Breakwaters.** Decks placed on top of jetties or breakwaters should be constructed of natural appearing materials (generally wood). Avoid using bright-colored or untreated metal. Avoid bright-colored deck coverings.
- (4) **Keep the Height of Jetties and Breakwaters Above Water to a Minimum Height Necessary to be Effective.** Large masses of jetty and breakwater structures above the water surface are seldom necessary and are visual impacts.

Standard: 54.12.C

Marina Support Facilities: *All new marinas and expansions of more than 10 boat slips in existing marinas shall comply with the standards listed below. TRPA may require projects of modifications of existing marinas to comply with these standards as conditions of approval.*

- (1) *Public restrooms, fueling facilities, chemical fire retardant distribution system, trash receptacles, and pump-out facilities for boat sewage shall be provided at commercial marinas and harbors;*
- (2) *Boat washing facilities if any, shall be connected to a sewer system or an acceptable alternate shall be provided;*
- (3) *Gas pumping facilities shall include emergency and standard shut-off systems to avoid gas leakage to the Lake;*
- (4) *Adequate parking shall be provided to accommodate all uses and activities associated with a marina; and*
- (5) *Water treatment system for waters contained within marinas shall be provided.*

Guidelines:

- (1) **Auxiliary Structures Should Be of a Consistent Style and Design.** This includes the color of boat lift equipment and storage facilities.
- (2) **Screen Boat Storage Areas and On-Land Repair Facilities From View From the Lake and Adjacent Scenic Highway Corridors.** This can be accomplished by site planning and screening. See the screening guidelines in Section 1. Site Design.
- (3) **Parking Areas.** Locate parking areas away from shoreline or screen them by landform, vegetation, or low walls so that they are not readily visible from the Lake and adjacent scenic highway corridor.
- (4) **Signs at Marinas.** Please refer to the guidelines in Section 8. Signs.
- (5) **Preserve Existing Vegetation.** Preserve existing mature vegetation when modifying existing marinas or constructing new marinas. The vegetation can often be used as a screen for undesirable views of parking, service and storage areas.
- (6) **Use Non-Reflective Glass on Windows Which Face the Lake.** This will minimize the reflectivity of man-made structures seen from the Lake and present a more natural appearing shoreline.
- (7) **Minimize the Use of Reflective Colors and Materials on All Structures and Surfaces Visible From the Lake or Adjacent Scenic Highway Corridors.** Use dark colors or colors which blend with the immediate background, and flat finishes.

Standard: 54.13

Shoreline Protective Structures: Shoreline protective structures may be permitted as follows:

Design And Construction Standards: Design and construction standards are:

- (1) *Sloping permeable revetments are the preferred design for shoreline protective structures. Bulk heads, gabions and other vertical revetments shall not be permitted unless, in addition to the findings required under Subsection 54.13.A, TRPA finds that;*
 - (a) *A sloping permeable revetment is not feasible; and*
 - (b) *The alternative structure will not cause significant erosion or modification of the foreshore.*
- (2) *Where a shoreline protective structure is necessary, it shall be of sufficient strength and depth to prevent movement of backfill materials into lake waters; and*
- (3) *Shoreline protective structures shall be constructed of natural materials to blend with the surrounding backshore or, if man-made materials are necessary, will be of earthtone colors.*

Guidelines:

- (1) Use Sloping Rock Revetments Whenever Possible.** Refer to The Handbook of Best Management Practices for construction and installation specifications. The use of bulkheads as shoreline protective structures is generally not recommended, except in specific situations (i.e., marinas, areas with little or no slope). Rock revetments can appear as part of a natural shoreline while walls, bulkheads, and other structural solutions contrast with the natural character of the shoreline.
- (2) Create Slopes Which Are Similar to Adjacent and Nearby Natural Slopes.** When using rock revetments, create slopes which mimic the form of nearby stable natural slopes (those which are not being undermined or undercut) in order to create a more natural appearing shoreline.
- (3) Use Vegetation to Soften the Visual Impact of a Rock Revetment.** Where possible, add landscape or revegetation plantings along the top and the sides of a shoreline protective structure to soften the visual impact and help blend it into the surrounding landscape.
- (4) Use Colors Which Blend With the Surrounding Natural Backshore Landscape.** This is particularly important when designing structural (man-made) protective structures. When used, walls and other structures should be constructed of natural materials whenever possible, or should be colored (tinted concrete, masonry) to closely match the surrounding natural landscape.
- (5) Design Shoreline Protective Structures to Have the Least Possible Impact on Surrounding Shoreline Properties.** When designing your shoreline protective structure you should take into account its effects on surrounding shorezone lands. Do not create structures which will cause significant erosion or modifications to the foreshore. The overall goal should be to protect your shoreline property while not destroying or substantially impacting your neighbor's.

APPENDIX A

Regional Plan Goals and Policies Affecting Design Review Guidelines

Appendix A

COMMUNITY DESIGN

The purpose of this Subelement is to implement the TRPA regional design criteria as they apply to the built environment. The Governing Board policy applicable to community design is derived from environmental threshold carrying capacities for scenic resources:

POLICY STATEMENT

It shall be the policy of the TRPA Governing Board in development of the Regional Plan, in cooperation with local jurisdictions, to insure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the Region.

This Subelement sets forth policies for new developments or existing developments in need of remodeling or redevelopment. Some aspects of development can be brought to total conformance within a certain period of time, such as a five year program to bring all signs into conformance with adopted standards. Others may require more time or extensive redevelopment or rehabilitation to correct past deficiencies.

GOAL #1

INSURE PRESERVATION AND ENHANCEMENT OF THE NATURAL FEATURES AND QUALITIES OF THE REGION, PROVIDE PUBLIC ACCESS TO SCENIC VIEWS, AND ENHANCE THE QUALITY OF THE BUILT ENVIRONMENT.

Based on findings in the Compact and evidence presented in the environmental threshold carrying capacity study, both the natural scenic qualities of the Region and the man-made environment have suffered degradation in the past decades. It is important that both the natural environment and the built environment be brought into compliance with the established thresholds, including the thresholds and policies found in the Scenic Subelement.

POLICIES

1. **THE SCENIC QUALITY RATINGS ESTABLISHED BY THE ENVIRONMENTAL THRESHOLDS SHALL BE MAINTAINED OR IMPROVED.**
Implementation of regional design review requirements will be required to ensure compliance with this policy.
2. **RESTORATION PROGRAMS BASED ON INCENTIVES WILL BE IMPLEMENTED IN THOSE AREAS DESIGNATED IN NEED OF SCENIC RESTORATION TO ACHIEVE THE RECOMMENDED RATING.**

GOAL #2

REGIONAL BUILDING AND COMMUNITY DESIGN CRITERIA SHALL BE ESTABLISHED TO ENSURE ATTAINMENT OF THE SCENIC THRESHOLDS, MAINTENANCE OF DESIRED COMMUNITY CHARACTER, COMPATIBILITY OF LAND USES, AND COORDINATED PROJECT REVIEW.

The intent of the criteria is that they be regional in nature yet specific enough to ensure that the Agency meets the mandate of specific thresholds and other policy requirements of this Plan as they relate to site planning. The concept is that a design review document is the focal point for implementing many other Plan policies relating to transportation, noise, water quality, air quality, scenic and aesthetic considerations, etc.

POLICIES

1. REGIONAL DESIGN REVIEW SHALL INCLUDE THE FOLLOWING TO BE USED IN EVALUATING PROJECTS THROUGHOUT THE REGION. THIS REVIEW MAY ENTAIL ADDITIONAL REQUIREMENTS OR SPECIAL REQUIREMENTS NOT LISTED BELOW.

A. Site Design: All new development shall consider site design which includes, at a minimum:

- 1) Existing natural features to be retained and incorporated into the site design.
- 2) Building placement and design to be compatible with adjacent properties and consideration of solar exposure, climate, noise, safety, fire protection, and privacy.
- 3) Site planning to include a drainage, infiltration, and grading plan meeting BMP standards.
- 4) Access, parking, and circulation to be logical, safe, and meet the requirements of the transportation element.

B. Building Height, Bulk and Scale: Standards shall be adopted to ensure attractive and compatible development. The following shall be considered:

- 1) Building height shall be limited to two stories except that provisions for additional height requirements shall be provided for unique situations such as lighting towers, ski towers, steep sites, redevelopment projects and tourist accommodation facilities.
- 2) Building height limits shall be established to ensure that buildings do not project above the forest canopy, ridge lines, or otherwise detract from the viewshed.
- 3) Buffer requirements shall be established for noise, snow removal, aesthetic, and environmental purposes.

- 4) The scale of structures should be consistent with surrounding uses.
 - 5) Viewshed should be considered in all new construction. Emphasis should be placed on lake views from major transportation corridors.
- C. Landscaping: The following should be considered with respect to this design component of a project:
- 1) Native vegetation should be utilized whenever possible.
 - 2) Vegetation should be used to screen parking and to alleviate long strips of parking space.
 - 3) Plants should be used to give privacy, reduce glare and heat, deflect wind, muffle noise, prevent erosion, and soften the line of architecture.
- D. Lighting: Lighting increases the operational efficiency of a site. In determining the lighting for a project, the following should be considered:
- 1) Exterior lighting should be minimized with an emphasis on safety and should be consistent with the architectural design.
 - 2) Overall levels should be compatible with the neighborhood light level. Emphasis should be placed on a few, well placed, low intensity lights.
 - 3) Lights should not blink, flash, or change intensity.
- E. Signing: In determining sign design, the following should be considered:
- 1) Off premise signs are prohibited.
 - 2) Signs should be incorporated into building design.
 - 3) When possible, signs should be consolidated into clusters to avoid clutter.
 - 4) Signage should be attached to buildings when possible.
 - 5) Standards for height, lighting, and square footage for on premise signs shall be formulated and shall be consistent with the land uses permitted in each district.

2. LOCAL JURISDICTIONS ARE ENCOURAGED TO ADOPT DESIGN GUIDELINES CONSISTENT WITH THE REGIONAL PLAN.

The Agency will consider local design review guidelines when preparing the regional design review guidelines. Also, the Agency will encourage local governments to adopt design guidelines consistent with the Agency guidelines.

APPENDIX B

Excerpts from Chapter 70, Uniform Building Code: Grading Setbacks

Appendix B

UNIFORM BUILDING CODE, CHAPTER 70

Grading Setbacks

Sec. 7011.(a) General. Cut and fill slopes shall be set back from site boundaries in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions shall be as shown in Figure No. 70-1.

- (b) Top of Cut Slope. The top of cut slopes shall be made not nearer to a site boundary line than one fifth of the vertical height of cut with a minimum of 2 feet and a maximum of 10 feet. The setback may need to be increased for any required interceptor drains.
- (c) Toe of Fill Slope. The toe of fill slope shall be made not nearer to the site boundary line than one-half of the height of the slope with a minimum of 2 feet and a maximum of 20 feet. Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work as the building official deems necessary to protect the adjoining property from damage as a result of such grading. These precautions may include but are not limited to:
 - 1. Additional setbacks.
 - 2. Provision for retaining or slough walls.
 - 3. Mechanical or chemical treatment of the fill slope surface to minimize erosion.
 - 4. Provisions for the control of surface waters.
- (d) Modification of Slope Location. The building official may approve alternate setbacks. The building official may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate that the intent of this section has been satisfied.

GUIDELINES: Refer to grading guidelines listed in Section 1. Site Design, of this manual.

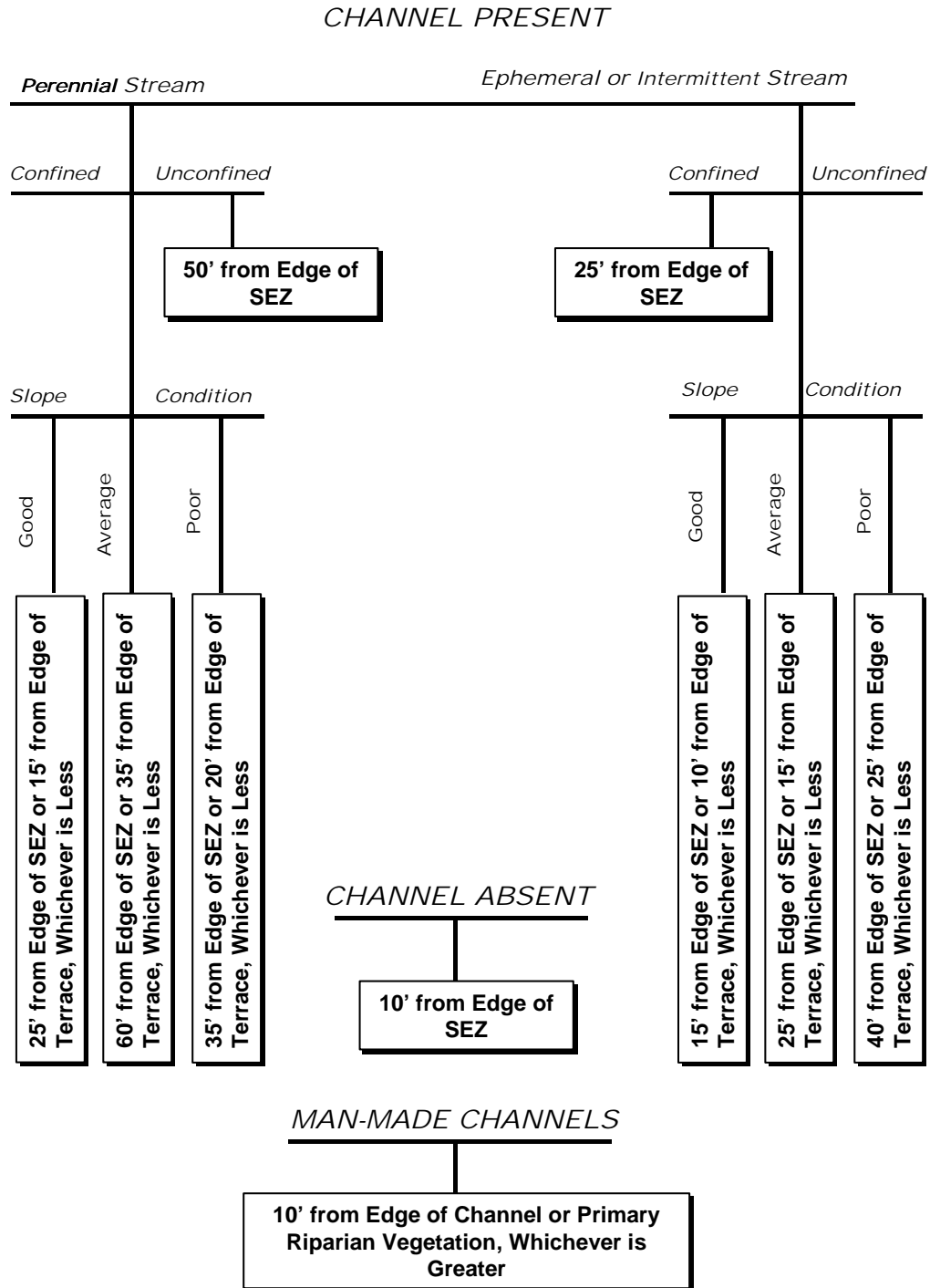
APPENDIX C

Chapter 37, Technical Appendix I SEZ Setbacks

Appendix C

CHAPTER 37, TECHNICAL APPENDIX I

I. Setbacks from SEZs



APPENDIX D

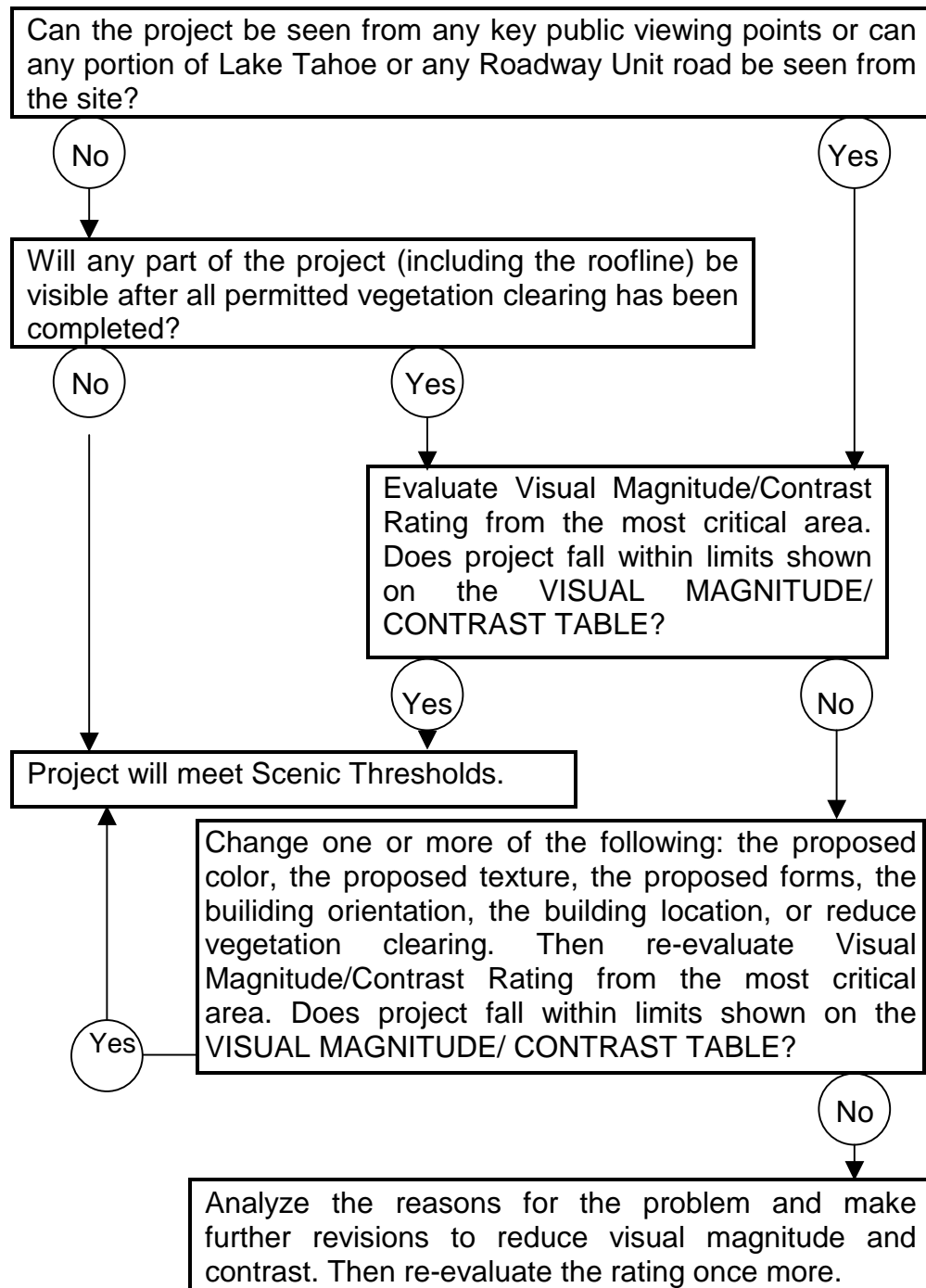
Rural Visual Magnitude/Color Contrast Rating System

Note: This appendix applies only to projects located within Rural Scenic Highway Corridors identified pursuant to Section 30.13 of the Code of Ordinances.

Appendix D

RURAL VISUAL MAGNITUDE/COLOR CONTRAST RATING SYSTEM

PROJECT REVIEW PROCEDURES TO MEET VISUAL MAGNITUDE/ CONTRAST RATING



VISUAL MAGNITUDE/ CONTRAST RATING PROCEDURAL STEPS

1. Determine Visual Magnitude by direct reading of visible portion of the building from the most critical viewing point OR
2. Determine the visible square footage by direct measurement of the building from elevational views and then subtract percent that is estimated to be screened from the most critical viewing point.
3. Utilize the Color Contrast Matrix below to determine the rating. Use estimated percentages of differing colored surfaces where necessary. For example, the roof and walls should be rated separately and prorated to percent visible.

Color Contrast Matrix	Light/Gloss	Med. ight	Medium	Med. Dark	Dark/Flat
White to Light Gray	1	2	3	4	5
Yellow	2	3	5	6	8
Red	3	5	6	8	10
Blue	4	6	8	10	12
Brown	5	7	9	12	15
Green	6	8	11	13	16
Medium Gray to Black	8	10	12	15	17

4. Estimate the percent of the perimeter of the building visible from the most critical viewing point. Then determine the rating on the matrix below.

Perimeter Contrast	Percent of Perimeters of Structure Visible									
	0-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%
Rating	10	9	8	7	6	5	4	3	2	1

5. Determine the number of plane surfaces. Then determine the rating column on the matrix below.
6. Determine the surface pattern. Then determine the rating row on the matrix below.

		Number of Visible Plane Surfaces				
		1 Plane Surface	2 Plane Surfaces	3-4 Plane Surfaces	5-6 Plane Surfaces	7+ Plane Surfaces
Surface Pattern	Unbroken Plane Surface w/little or no Texture	1	2	3	4	5
	Minimally Broken Plane Surface with Minimal Texture	2	3	4	5	6
	Moderately Broken Plane w/Med. Texture	3	4	5	6	7
	Heavily Broken Plane w/Heavy Texture	4	5	6	7	8

7. Add the three scores for color, perimeter, and surface and plane textural contrast. This is the CONTRAST RATING.
8. Using the VISUAL MAGNITUDE/CONTRAST RATING TABLE, move down the Contrast Rating Row until you reach the Contrast Rating determined in Step 7.
9. Follow that row to the distance column from which you determined Visual Magnitude. If your Visual Magnitude Rating is less than the figure in that column, the project is satisfactory. If it is more, the project will not meet the Scenic Threshold Requirements. OR
10. If you determined the square footage visible, then follow the row to the column on the right. If the visible square footage is less than the figure on the matrix, the project is satisfactory. If more, the project will not meet the Scenic Threshold Requirements.

NOTE: For added information on perimeter ratings, number of plane surfaces, and the texture and appearance of plane surfaces, see graphics on the following pages.

Rural Visual Magnitude/Contrast Table

Contrast Rating		Distance in Miles					Visible Sq. Ft. Allowed	
		1/16	1/8	1/4	1/2	1		
		Visual Magnitude Reading						
	3	6400	1600	400	100	25	55	
	4	7350	1840	460	115	29	63	
	5	8450	2110	530	130	33	73	
	6	9700	2425	605	150	38	84	
	7	11150	2785	695	175	44	97	
	8	12800	3200	800	200	50	110	
	9	14700	3675	920	230	57	120	
	10	16900	4220	1055	265	66	150	
	11	19400	4850	1215	305	76	170	
	12	22300	5575	1400	350	87	195	
	13	25600	6400	1600	400	100	225	
	14	29400	7350	1840	460	115	260	
	15	33800	8450	2110	530	130	295	
	16	38800	9700	2425	605	150	340	
	17	44600	11150	2785	695	175	390	
	18	51200	12800	3200	800	200	450	
	19	58800	24700	3675	920	230	515	
	20	67600	16900	4220	1055	265	595	
	21	77600	19400	4850	1215	305	680	
	22	89100	22300	5575	1400	350	785	
	23	102400	25600	6400	1600	400	900	
	24	117600	29400	7350	1840	460	1035	
	25	135100	33800	8450	2110	530	1190	
	26	155200	38800	9700	2425	605	1365	
	27	178300	44600	11150	2785	695	1565	
	28	204800	51200	12800	3200	800	1800	
	29	235300	58800	24700	3675	920	2065	
	30	270200	67600	16900	4220	1055	2375	
	31	310400	77600	19400	4850	1215	2725	
	32	356600	89100	22300	5575	1400	3125	
	33	409500	102400	25600	6400	1600	3600	
	34	470500	117600	29400	7350	1840	4150	
	35	540500	135100	33800	8450	2110	4750	

APPENDIX E

Acceptable Pantone Colors for Internally Illuminated Signs

Appendix E

PANTONE COLORS FOR INTERNALLY ILLUMINATED SIGNS

Note: This listing identifies acceptable colors for internally illuminated sign background (not including neon signs) using the Pantone Matching System. Other brands may be substituted provided they can be identified as comparable to a color(s) on this listing.

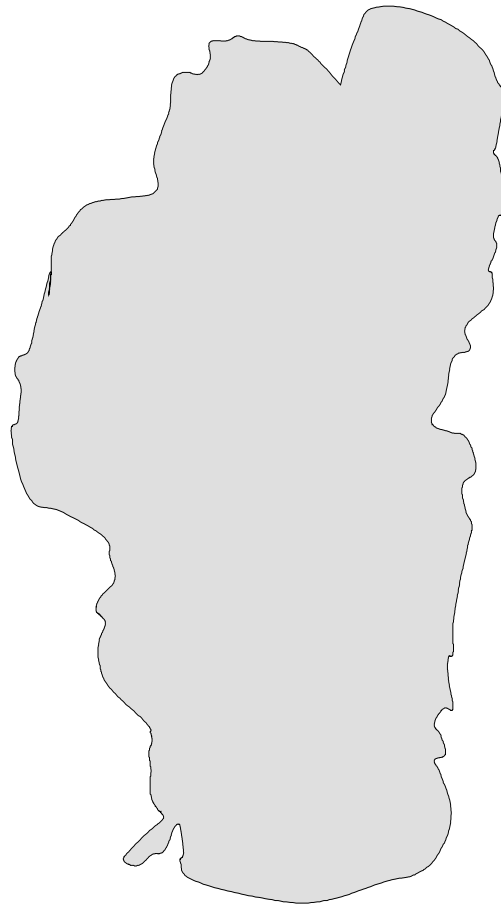
Pantone Color Formula Numbers:

105	174	234
112	175	235
118	180, 1805	241
119	181, 1815	242
125	187	248
126	188	249
132	193	254
133	194	255
139, 1395	195	259
140, 1405	201	260, 2603, 2607
145	202	261, 2613, 2617
146	208	262, 2623, 2627
147	209	267
153	215	268, 2685
154	216	269, 2695
160, 1605	221	273, 2735
161, 1615	222	274, 2745
167, 1675	228	275, 2755
168, 1685	229	276, 2765
280	349	439
281	350	440
282	356	444
287	357	445
288	363	446
289	364	447
294	370	Warm Gray 9
295	371	Warm Gray 10
296	377	Warm Gray 11
301	378	Cool Gray 8
302, 3025	385	Cool Gray 9
303, 3035	392	Cool Gray 10
308	410	Cool Gray 11
309	411	448, 4485
315, 3155	412	449, 4495
316, 3165	417	450, 4505
322	418	455
323	419	456
329, 3292, 3295, 3298	424	462, 4625
330, 3302, 3305, 3308	425	463, 4635
335	426	464, 4645

336	431	469, 4695
341	432	470, 4705
342, 3425	433	476
343, 3435	438	477
478	546, 5463, 5467	
483	547, 5473, 5477	
484	548, 5483, 5487	
490	553, 5535	
491	554, 5545	
497, 4975	555, 5555	
498, 4985	560, 5605	
499, 4995	561, 5615	
504	567	
505	568	
506	574, 5743, 5747	
511, 5115	575, 5753, 5757	
512, 5125	576, 5763, 5765	
518, 5185	581, 5815	
519, 5195	582, 5825	
520, 5205	871	
525, 5255	872	
526, 5265	873	
527, 5275	874	
532	875	
533	876	
534	877	
539, 5395		
540, 5405		
541, 5415		

APPENDIX F

Lake Tahoe Recreation Sign Guidelines



Appendix F

LAKE TAHOE RECREATION SIGN GUIDELINES

INTRODUCTION

These guidelines are the product of a coordinated effort by the Tahoe Coalition of Recreation Providers (TCORP) to respond to recognized deficiencies in existing recreational signs in the Tahoe Basin. TCORP is an informal professional association dedicated to coordinating public and private recreation providers management activities, and to enhance, unify and promote positive recreation experiences within the Lake Tahoe area.

The guidelines were created through a consensus building process to clarify and unify existing recreational signs and, ultimately, to better serve visitors seeking recreation opportunities. Implementing these guidelines will result in improved recreational signs that benefit both recreationists and recreation providers.

Purpose And Need

The Lake Tahoe Basin offers a wide range of public recreation opportunities at sites or facilities operated by an equally wide range of local, state, federal agencies, and private concessions. The signs associated with these opportunities tend to emphasize the individual operator and site, and lack elements which connect the site to other facilities in the Basin.

Visitors to the Lake Tahoe Basin, however, typically perceive all of the cities, communities, public utility districts and state parks as one area, Tahoe. To the majority of tourists and recreationists who frequent this area, Tahoe is not divided by jurisdictions, county or state lines, federal or state properties, or city limits.

Visitors and locals both are frequently confused by the inconsistency in recreational signs and the extent and limits of public ownership. This is particularly troublesome to visitors with a limited command of the English language who cannot read the sign text and must rely on sign shape, color or symbols to understand a message. Each recreation provider has developed its own signs with little or no regard to established sign programs utilized by other agencies in the Basin; there is no uniform sign style or icon which conveys the message, "This is a public recreational facility in Tahoe".

Through public workshops and interviews with agency personnel, it became widely apparent that a visitor-friendly uniform sign style was much needed and conspicuously absent from the Tahoe experience.

These guidelines have been prepared to respond to this recognized need and assist public recreation providers in providing better information to their "customers."

Process And Goals

In 1992, the formation of TCORP provided a forum for interested members to advocate and stimulate action toward "user friendly", uniform recreational signs in the Tahoe area. The challenge was considerable.

The task of integrating existing sign policies and finding common ground for uniformity was daunting, because of the diverse management and ownership of recreational facilities, which include one city, several public utility districts, five counties, two state park systems, federal lands, state highway agencies and, of course, privately-owned public facilities. The enthusiasm and support for this project on the part of participating TCORP members overcame these obstacles and helped make these guidelines possible.

TCORP in coordination with its members, and with funding from the California Tahoe Conservancy, developed these uniform recreational sign guidelines for public and private recreational providers throughout the basin and surrounding communities.

The development process for these guidelines began by identifying primary sign issues. The issues were identified through a survey of existing signs in Tahoe and interviews with major recreation providers to learn what worked, what did not, and what the limitations are to providing good signs. Based on this input, two "goals" were established for these guidelines.

- ☐ Promote recognizable uniformity among all Tahoe public recreation signs that reflect a sense of place in Tahoe and convey a message that reinforces the public nature of recreational opportunities.
- ☐ Promote well-designed and appropriate signs (legible, properly placed, etc.)

The intent of these guidelines is to provide a simple and usable tool for combining graphic elements, color, shapes and materials into common images and consistent messages. They should be used by all Tahoe Basin recreation providers (public agency and private concession) in the planning and design of their sign programs.

PLANNING CONSIDERATIONS & FACILITY SIGN PLANS

The decision to design and place a sign should be a deliberative process. Numerous unnecessary signs are unattractive, expensive to maintain and detract from a visitor's experience of Lake Tahoe. Once it is clear that a sign is needed, a process should be followed to design and place the sign to assure that it fits its purpose, the site, and the visitor's expectations.

Planning Considerations

In determining the need for any sign or marker, the following questions should be answered:

- What does the visitor need to know?
- Is guidance (direction) or a message needed?
- If a message, where is the message needed?
- What message is needed?
- How should the message be presented (sign, symbol, exhibit, audio, or other means)?
- Is the sign for drivers of vehicles, pedestrians, or both?
- At what speed is the sign reader traveling?

Before proceeding with a sign, the answers to the above questions should be tested on several people not immediately concerned with the particular sign under consideration.

Once it is determined that a sign is required, the basic design of the sign can be considered. To be effective the sign must:

- Fulfill a need (determined above).
- Command the attention and respect of the user.
- Convey a clear, simple message.
- Give adequate time for proper response.

To fulfill these requirements, five fundamental considerations should be evaluated:

1. Uniformity

Similar situations should be treated in the same way. Uniformity of signing simplifies the visitor's task of recognizing, understanding, and reacting. It helps recreation providers through economy in sign manufacturing, maintenance, and administration. It also supports users' recognition that they are in the Lake Tahoe Basin. Simply using uniform signs does not, in itself, constitute uniformity. A standard, uniform device used where it is not appropriate is as objectionable as a nonstandard device; in fact, it may be worse because of the confusion it can create. If a well-recognized, uniform sign can serve the purpose, it should be used.

2. Design

The sign design should combine features such as size, contrast, color, shape, composition, and lighting or reflection to draw attention; use shape, size, color, and simplicity of message to produce a clear meaning; and consider legibility, size and placement to permit adequate time for reader response. Every aspect of sign design should be used to motivate visitor action. Recreation signs should be in harmony with the environment in which they are placed and must be "human" in their messages.

3. Placement

This assures that the sign is within sight of the user so that it will be seen and, if directed to a driver, is located where a driver traveling at normal speed has enough time to safely make the proper response.

4. Operation

The right sign must be installed to meet the operational requirements at a given location and not conflict with other intended or implied messages. It should be placed in a uniform and consistent manner so visitors will properly respond, based on their previous exposure to similar situations.

5. Maintenance

Signs must be maintained to a high standard to assure that legibility is retained, that the sign is visible, and that it is removed or seasonally covered when not applicable. Clean, legible, properly mounted signs command the respect of visitors. In addition to physical maintenance, functional maintenance is required to adjust to current conditions. The fact that a sign is in good physical condition should not be a basis for deferring needed replacement or change due to functional requirements. Furthermore, careless maintenance can reduce the value of a group of signs by destroying the balance or cohesion of the group. For example, replacement of a sign with one that is disproportionately sized or out of character will be a detriment to those around it as well as itself.

FACILITY SIGN PLANS

Every recreational facility which requires more than one sign type to inform and direct visitors should have a current sign plan and inventory. A comprehensive sign plan provides the framework for managing an effective sign program. It is the database for decisions involving new installations, replacements, removals, maintenance, and budget preparation. The plan should include all on-site signs and any signs on peripheral roadways and the surrounding area that pertain to access or activities.

The Sign Plan establishes the role of all signs in carrying out the facility's objectives. Signing should relate to all transportation modes, providing information, direction and traffic control for the benefit of the visitor's safety. Plans should contain inventories, historical records, an action plan, accomplishment documentation, inspection and maintenance records, and relevant physical, technical, and management information needed to effectively administer the sign program.

The Facility Sign Plan should address five major planning concerns:

1. Purpose/Descriptive Narrative

This section should be brief, delineating the purpose of the plan as it relates to the objectives of the facility, its resources, and the presentation of these objectives and resources to the visitor.

2. Sign Inventory

The inventory should include a description of each existing and planned sign or other traffic control devices: their supports, locations, conditions and any relevant vandalism history. The description should contain sufficient detail to be able to re-order each sign if it is damaged or missing. Inspections should be made both in daylight and at night, if the facility operates at night.

Bulletin board assemblies, groups of delineators, boundary line markings, and other similar groupings can be inventoried as a unit. A Sign Plan map or similar drawing should also be prepared to map the location of the signs in the inventory. The following specific information should be included in the inventory:

a. ID Number:

Each sign should be assigned a unique identification number for use in developing the plan, recording maintenance, and for future reference.

b. Audience/Purpose:

Describe the purpose/need for the sign and the audience to which it is directed.

c. Sign Text:

Describe the sign type, catalog (manufacturer or source number if any) and the message exactly as it appears on the sign.

d. Panel Size:

Document overall size of the sign panel and the type of material.

e. Letter Size:

Document letter heights of primary and secondary text(s).

SITING CONSIDERATIONS

Intended Audience Visibility

For any graphic display to communicate a message, it must first be seen by the audience for which it is intended. To communicate, signing for recreational facilities must

register from a distance, outdoors, and, generally, when the reader is in motion. Failure to recognize the effect of the reader's motion in the design of a sign can result in ineffective communication. The modes of travel and speeds of recreationists fall within a wide range; however, for the purposes of sign design two basic categories can be considered:

- Pedestrian Mode (includes bicycles, skaters, etc.) and
- Vehicular Mode

The distance at which a sign must be read is in part determined by the rate and type of motion because of the recognition and reaction time necessary to use the information provided by the sign.

Pedestrian movement is characterized by a wide range of variable sensory stimuli. These involve frequent focal points with many highly differentiated spaces and objects. Because of the slow speed of pedestrian movement, there is plenty of time to read and react to signs, or one can stop to read a sign. Vehicular movement involves generally larger scale sensory stimuli consisting of free-flowing forms, widely spaced. Objects and spaces are more difficult to comprehend from a vehicle than when one is a pedestrian.

There is a definite difference between the perceptual processes of the driver and the pedestrian. Basically, it is one of involvement. A pedestrian can be very involved with many elements of the environment while a driver cannot. Tests have conclusively demonstrated that there is little correlation between what one perceives as a driver and what one perceives as a pedestrian along the same path.

There are five accepted limitations that increasing speed imposes on a sign reader:

1. Concentration increases

While stationary or walking, one's attention may be widely dispersed, but when moving in an automobile, one concentrates on those factors that are relevant to the driving experience.

2. Point of concentration recedes

As speed or motion increases, one's concentration is directed at a focal point increasingly further away. At 45 mph the natural eye focus is 1,200 feet ahead of the car, at 25 mph it is 600 feet ahead, and at 15 mph it is 250 feet.

3. Peripheral vision diminishes

As the eye concentrates on detail at a point of focus a great distance ahead, the angular field of vision shrinks. This shrinking process is a function of focusing distance, angle of vision, and distance of foreground detail. At 25 mph the field of vision is approximately 90 degrees, while at 45 mph it is reduced to 65 degrees, and at 60 mph it is reduced to 40 degrees.

4. Foreground detail fades increasingly

While concentrating on more significant distant objects, one perceives foreground objects to be moving and increasingly blurred. At 40 mph, the closest point of clear vision is 80 feet ahead of the car. At 60 mph, clear vision extends from 110 feet to 1,400 ahead. At that speed, the distance from 110 to 1,400 feet is traveled in less than 15 seconds. This is why elaborate detail on highway signs is meaningless.

5. Space perception becomes impaired

With decreasing amounts of time to perceive objects changing, specific details are less noticeable, making spatial perception more difficult.

Given these human attributes, it is clear that design criteria for pedestrian oriented and motorist-oriented signing should differ. Furthermore, given the different "perspectives" of the pedestrian and motorist, it is clear that signs designed and placed for one audience will have limited value, if any, in communicating with the other. The planning of signs should carefully consider the information needs of both audiences, if both are using the facility.

Sign Elements Sizing Matrix

Given the above discussion, Table 1.1 has been developed to guide sign designers and manufacturers in constructing signs which meet the needs of the intended audience.

Sizing Matrix for Sign Elements

Table 1.1

Sign Type	Criteria	Letter Height	Pictogram Size	Lake Shape Height	Tahoe Text Height	Blue Band Height
Roads	20 mph & less	3"	8-9"	3"	1 ½"	½"
	20 to 35 mph	4"	12"	4"	2"	⅔"
	35 to 50 mph	5"	14-15"	5"	2 ½"	⅝"
	More than 50 mph	6"	18"	6"	3"	1"
Motorized Trails (e.g. OHV trail)	25 mph & less	2"	8-9"	2"	1"	⅓"
	More than 25 mph	3"	12"	3"	1 ½"	½"
Non-motorized Trails (e.g. bike trail)	Viewed from 0-20'	1"	3-4"	1"	½"	⅓"
	21' to 75'	2"	6"	2"	1"	⅓"
	Over 75'	3"	8-9"	3"	1 ½"	½"
Interpretive-Informational (e.g. hiking trail)	Viewed from 4' or less	⅝"	2"	⅝"	⅝"	⅓"
	5' to 7'	¾"	2"	¾"	¾"	⅓"
	8' to 12'	1"	3"	1"	½"	⅓"
	13' to 20'	2"	6"	2"	1"	⅓"
	Over 20'	3"	8-9"	3"	1 ½"	½"
Waterways	Viewed from 0' to 150'	4"	12"	4"	2"	⅔"
	Over 150'	6"	18"	6"	3"	1"

Note: Total sign area, as well as all other sign components, must comply with all provisions of Chapter 26, TRPA Code of Ordinances; some specific heights may not be achievable given the total sign area limitations.

UNIFORMITY OF PLACEMENT AND INSTALLATION

As with design, uniformity of placement and installation assists users in observing the sign, understanding the message, and in determining where the directed action is to take place. Locations should be selected which maximize the opportunity for the sign to convey the intended message.

Along roads and trails, the general rule is to place signs on the right-hand side of the travelway as close to the standard location as possible. The standard location for roadside traffic signs, that meet required Department of Transportation safety requirements, is six feet from the edge of the shoulder, 12 feet from the travelway (if no shoulder) or two feet behind a curb. The minimum standard height for such a sign is five feet to the bottom of the sign (seven feet where parking or other obstructions exist). The standard location for signs along a bike trail is a minimum of three feet off the trail and a minimum of four feet to the bottom of the sign.

In addition to the basic placement standards above, the following guidelines should be considered when selecting sign installation locations:

Sign Placement

Place signs where they provide adequate time for viewer response, considering such things as approach speed, road conditions, etc.

Location Selection

Select locations that minimize viewing obstructions. Some common placement locations to be avoided, if possible, include:

- Dips in the roadway or trail.
- Just beyond the crest of a hill.
- Where the sign may interfere with the normal operation of the facility.
- Too close to other foliage that could cover the sign face
- Snow Removal Areas
- Place motorist-oriented signs within the cone of vision of the viewer, previously described.

GENERAL GUIDELINES

These guidelines incorporate two basic components. First, they identify the essential "Tahoe character" elements that can be incorporated in a recreation sign and outline a program to combine them in a consistent way. Second, these guidelines incorporate other standardized sign components and design elements which are well recognized nationally and internationally.

Together, these two basic components can be creatively applied to individual signs or facility sign plans by recreation providers in their own facility signs and in TCORP prescribed regional signs, identified in these Guidelines. Consistent use of these elements will establish the desired level of uniformity among recreation signs in the Basin.

The following discussion provides an overview of the various elements that contribute to sign design. Their role in establishing consistency and uniformity is identified along with general guidance for appropriate design.

Materials

Materials used for notable recreation signs at Tahoe should be consistent with and complementary to the natural alpine setting. Materials should be rustic (stone, wood or "wood-like"), yet durable to minimize costly replacement. Wood can be used for both the sign face and supporting structure while stone is typically used as a base for a sign structure. If natural wood is the selected material, wood species, such as cedar or pine, should be used and the changes in color which occur with aging should be anticipated in the sign design.

Similarly, native rock such as granite should be used for stone work. New technology, recycled plastic or composite plastic/wood lumber, is a viable option pending field testing for durability and careful color selection. All materials should have a rustic character consistent with the natural alpine setting.

Although wood is strongly associated with the Tahoe character, it is not necessarily the preferred material for all signs. Fabrication and maintenance costs require that standard metal signs be utilized in many locations. Although these do not convey the Tahoe character message as well as a wooden sign, they are perfectly acceptable as long as they incorporate the other elements of these guidelines. Bare metal components should be minimized and mounting posts and sign backs should be painted a dark brown or black color to blend with the environment.

Color

Color is also an important standardization for traffic control signs. For example, brown is the standard background color for guide and information signs related to points of recreation or cultural interest. This is a national standard established by the Federal Highway Administration. This standard is consistently used for signs along state and federal highways, as well as by state and federal recreation providers.

These guidelines recommend using the Federal Standard brown as the background color. This builds upon established standards for recreational signs, increases consistency with existing signs, and a brown metal sign face echoes a wooden sign face, which is the preferred sign face material. For these reasons, metal recreation signs should use a brown background color whenever possible.

Conversely, blue is a color associated with Tahoe and the distinct color of the lake. However, blue is also used as the standard background color for information signs related to motorist services, according to the Federal Highway Administration. It is also recognized as the color used to designate handicapped services. In this case, although blue can be closely associated with Tahoe, other established uses limit its applicability to the Tahoe recreational sign program.

Because blue is so strongly associated with Tahoe, it will be used in a unique way which is distinctly different from the established standard uses. A specific blue color has been identified as an element for uniformity

Shapes

Some agencies, the United States Forest Service in particular, use distinct sign shapes which have become familiar to the public. Because sign shape can be a very strong way to create a unique identity, either for a specific site or recreation agency, no standardized shape is suggested in these guidelines. This allows individual agencies to continue to use established shapes while incorporating elements of these guidelines

Unusual shapes, however, should be carefully evaluated for their fit in the natural Tahoe setting (e.g., non-traditional forms probably do not fit) and shapes that mimic natural forms such as a tree or animal are difficult to execute well. In general, a simple rectangular form can be well-executed in almost any situation and is usually the best solution.

Lettering, Symbols and Visibility

Legibility is critical to any well-planned sign program. The most attractive sign has no value if the potential reader can't see or understand the message. Lettering should be easily seen in varying daytime weather conditions, yet not overpower the graphic symbols or the sign shape. The size of lettering should be determined by considering legibility factors such as distance, mode of transportation, and speed at which the intended audience is traveling (see Table 1.1).

In order to blend with the natural environment and be consistent with the brown/white federal recreation sign standard, lettering and symbols should be white or light colored against a dark background.

Lighting of recreational signs is recommended only if the facility is normally open after daylight hours. Illuminated signs should be carefully lit from remote mounted fixtures well integrated into the sign structure or not visible to sign viewers. Back-lit or internally illuminated signs are discouraged. The use of reflective lettering is advisable only on directional sign that may be required by visitors leaving a facility after dusk and signs marking closed gates that could be approached after dark.

Maintenance

A key component of good signs is minimizing maintenance demands. This can be accomplished by using appropriate materials and installation techniques. The sign designs outlined in these guidelines are intended to be cost effective for recreational providers. The use of evolving, cutting-edge technologies that emphasize the use of recycled plastic and wood products will not only provide extremely durable signs, but will emphasize the environmental ethics shared by residents and visitors of the Lake Tahoe Basin.

Durability and maintenance must be considered at the outset, since a damaged or poorly maintained sign may be worse than no sign at all.

ELEMENTS OF UNIFORMITY

The primary goal of these guidelines is to establish a level of uniformity among all public recreation signs in Tahoe. Although uniformity often means rigid standardization, in exploring this concept during the guideline preparation, several considerations became apparent. There was a competing need to allow signs to vary so they could complement the site or character of the facility, or conform to existing agency standards. This meant that uniformity had to be a component that could be used on a variety of sign styles.

It was also recognized that uniformity would need to be achieved with a wide range of sign types and sizes. Ideally, the uniformity should also be capable of being added to existing signs to begin to establish a uniform pattern without needing to completely replace signs.

These conclusions further reinforced the determination that uniformity would need to be achieved through sign design elements which were flexible as opposed to a single fixed sign standard.

It is also important for the elements of uniformity to convey or support the message to the user that the recreational facility is publicly accessible.

Many common graphic elements were considered. The elements that received the most support from TCORP members and met the technical requirements are the following:

- ❑ Tahoe Logo - the use of a unique symbol or set of graphic elements that embodies the Tahoe image. See Figure 1.1 of the Technical Appendix.
- ❑ Standard Recreational Sign Colors (brown background with white letters) - this is widely used for existing signs, particularly highway ROW signs (and wood signs).
- ❑ Recreation Symbols - the use of "international" symbols (pictograms) to depict facilities, services or recreation opportunities at a site. See Figures 1.2 and 1.3 of the Technical Appendix.

Tahoe Logo

A graphic image for Lake Tahoe has been supported by TCORP for many years because it has the greatest potential to both convey the "public recreation at Tahoe" message and contribute to uniformity among recreational signs. The most obvious logo image is the unique Tahoe lake shape, however it was found to be not readily recognized by the visiting public. Another logo concept is the use of a unique typeface in initials or to spell a few significant words to create a logo. Research determined that use of the word "TAHOE" added considerable recognition to the lake symbol. Combining graphic images was found to have the greatest ability to confirm the "Tahoe" message and provided flexibility for many sign design situations.

The selected logo is comprised of three elements, the lake shape graphic, the text "TAHOE" in logotype, and a blue stripe. The blue stripe is the required element of the logo and may be combined with the lake shape graphic and/or the text "TAHOE" where appropriate. The blue stripe is the required minimum logo element because of its adaptability with most sign graphics. The specified color is Pantone Process Blue 2X CVC.

A standard lake shape is also provided in the Appendix for use in sign design. The font selected for the text "TAHOE" is a unique "logotype" font. This logotype is also specified in the Appendix which should be referenced for reprographic use.

Standard Recreational Sign Colors

To a certain extent, standardization should also be used as an element of uniformity. However, standardization by its very nature limits flexibility and thus can usually be achieved only to a limited extent within the range of signs addressed in these guidelines. Given these constraints, standardization is limited to the basic use of color.

Use of the federal brown/white color scheme provides a level of standardization in the Basin that is also consistent with similar signs throughout the nation. Although this color scheme is not unique to Tahoe, when combined with the logo elements, it clearly contributes to the "public recreation at Tahoe" message.

Recreation Symbols

The use of symbols or pictograms instead of words to convey messages on signs has been growing, particularly in areas of international tourism. It is now common to use pictograms to convey the majority of the message for informational, emergency and safety signs which must be equally understood by visitors and residents. Consistent use of pictograms in Tahoe recreational sign will improve communication with non-English speaking visitors as well as promote uniformity.

The Federal Recreation Symbol set (Figure 1.2 of the Technical Appendix) should be used for recreational signs in the Tahoe Basin. The U.S. Forest Service, which controls the majority of recreation facilities in the Basin, uses this pictogram set.

In addition to the Federal Recreation Symbols, a Tahoe Lake Access pictogram was developed in conjunction with these guidelines (Figure 1.3 of the Technical Appendix). This symbol is intended to identify sites where lake access is provided, but not in the form of typical shoreline facilities (e.g., boat ramp, swimming, etc.) This pictogram may be used in the same manner as the other recreation symbols, to identify a site which meets the lake access criteria .

Implementing these three elements of uniformity (standard colors, Tahoe logo, and recreation symbols), either singly or in combination, will greatly improve the consistency in appearance of the public recreation signs in the Basin.

SIGN TYPES

The following six sign types are illustrated within the following sections because of their common existing and proposed use throughout the Tahoe Basin. These are not the only sign types used to denote recreational uses around the Lake that can or will incorporate the above mentioned uniform elements. As additional sign types are designed or additional uses of the uniform elements are discovered, they should be incorporated into these guidelines. These signs were selected for detailed discussion because they are the key links between the potential recreationists and the sites or routes which he or she seeks. The Advance Notice and Facility ID/Welcome signs are existing sign types currently provided by the state departments of transportation and individual facility operators. The Lake Access, Bike Route Marker, and Road Marker are new sign types defined in these guidelines.

Advance Notice

This is typically a sign placed off-site from the actual recreation facility and normally installed and maintained by the California Department of Transportation (Caltrans) or The Nevada Department of Transportation (NDOT). The intent of this sign type is to notify the user that they are approaching the entrance to a public recreation facility. The message typically includes the name of the facility, the distance to the facility and the recreational opportunities the facility provides.

The sign size will vary depending upon the speed of the traveler nearing this sign. It is critical that the text of the Approach/Advance Notice sign guide the visitor through a positive and inviting message. This sign varies from the standard Caltrans or NDOT sign in its use of the Tahoe logo elements and the incorporation of the international pictograms as a part of the sign plate. The sign plate supports will be the standard used by Caltrans or NDOT for the appropriate sign size. The lettering should use the Helvetica Medium font in white against a medium brown background. Elements of the Tahoe recreation logo should be placed a minimum of 1" from the bottom and side edges. Refer to Table 1.1 for the design and size recommendations of the logo elements. Figure 1.4 in the Technical Appendix illustrates a typical advance notice sign.

Facility ID/Welcome

Many agencies have established font types and sign design criteria. The elements of this sign type are not intended to replace these standards but merely to include an element of uniformity. If the agency installing the sign does not have established sign standards, these elements should match those of the Approach/Advance Notice sign. If, however, the facility owner chooses to use their standard sign fonts and graphics, a minimum of

the blue stripe and either the “TAHOE” text or the lake shape graphic should be incorporated into the overall sign graphics as per Table 1.1. The support material should reflect the framing with wood timber and/or the natural stone of the Tahoe area. This flexibility in design elements and graphics allows facilities to maintain uniqueness while incorporating unifying elements. The sign face should be a natural material (i.e. wood or stone) with contrasting text colors. Figure 1.5 illustrates a sample facility ID/ welcome sign in the Technical Appendix.

Lake Access

The Lake Access Marker (Figure 1.3 of the Technical appendix) should combine the use of an international pictogram for access to water with an arrow, if necessary. The sign plate should be a 6”x6” lake access pictogram, Federal Standard 595 white 27857 in color on a Pantone Process Blue 2X CVC background. The word “TAHOE” in all capital letters and at 1¼ inches high should be routed or laser cut into the bollard one inch above the sign plate using the modified font in Figure 1.1. The bollard should be 8”x 8” in rough dimensioned cedar or wood substitute, chamfered around the entire top and, if cedar is used, it should be allowed to weather gray (see Figure 1.6 of the Technical Appendix) The height of the bollard should be 42” above finish grade or finish pavement, whichever is higher (see Figures 1.7 & 1.8 of the Technical Appendix).

Design Alternative

The only suggested alternative to the above will be of size. The 8”x 8” bollard with a 6”x6” pictogram plate should be used in highly developed urban areas where visual confusion makes it difficult to see a smaller sign plate. In situations where there is little urban visual competition, the bollard should be 6”x6” with a 4”x4” pictogram plate.

Bike Route Marker

The Bike Route Marker’s general graphic appearance should match that of the Lake Access Marker. The sign plate should be a 6”x6” Federal Standard Bike Route pictogram, Federal Standard 595 white 27857 in color on a Federal Standard 595 brown 20059 background. The word “TAHOE” in 1¼ inch high capital letters should be routed or laser cut into the bollard above the sign plate (using the font specified in Figure 1.1). The bollard should be 8”x 8” in rough dimensioned cedar or wood substitute, chamfered around the entire top and, if cedar, allowed to weather gray (see Figure 1.7). The height of the bollard should be 42” above finish grade or finish pavement, whichever is higher (see Figures 2.1 & 2.2 in the Technical Appendix).

Design Alternative

The only suggested alternatives to the above will be those of size. The 8”x8” bollard with a 6”x6” pictogram plate should be used on developed bikeways within urban areas. In situations where the bike route is on a dirt road or wide dirt trail, the bollard should be 6”x6” with a 4”x4” pictogram

Trail Markers

These small bollard markers should convey a sense-of-place to visitors or residents. In unique situations, multiple sign plaques may be combined on one bollard to minimize visual clutter while informing the user of access options. The Trail Marker general graphic appearance should match that of the Lake Access and Bike Route Marker. The word “TAHOE” in one-inch capital letters should be routed or laser cut into the bollard above the sign plate using the “Tahoe” font (see Figure 1.1). The sign plate should be a 4”x4” Federal Standard Trail pictogram, Federal Standard 595 white 27857 in color on a Federal Standard 595 brown 20059 background. The bollard should be 6”x 6” in rough dimensioned cedar or wood substitute, chamfered around the entire top and, if cedar, is

allowed to weather gray (see Figure 1.8). The height of the bollard should be 42" above finish grade or finish pavement, whichever is higher (see Figures 2.1 & 2.2 in the Technical Appendix).

Design Alternative

The above 6"x6" bollard with a 4"x4" pictogram plate should be the only size used for this sign type. This type of marker should typically not be located in areas where visual confusion exists.

Road Markers

The Road Marker general graphic appearance should be similar to, yet unique from, that of the other above mentioned markers. The sign plate should be 18" tall x 10" wide, depicting the number of the marker and a graphic outline of Lake Tahoe with a white dot orienting the visitor to their approximate location on the lake shore. The color of the number, and border should be Federal Standard 595 white 27857 in color on a Federal Standard 595 Brown 20059 background. The lake shape graphic shall be Pantone Process Blue 2XCVC. The word "TAHOE" in 2 ¼ inch capital letters should be routed or laser cut into the bollard above the sign plate (using the font identified in Figure 1.1.) The bollard should be 12"x 12" in rough dimensioned cedar, chamfered around the entire top and allowed to weather gray (see Figure 1.9). The height of the bollard should be 48" above finish grade or finish pavement, which ever is higher, (see Figures 2.3 & 2.4 of the Technical Appendix).

IMPLEMENTATION

Implementation of these guidelines involves two processes. The first is the physical process of incorporating the design concepts to existing and new signs in the Basin. The second is an educational process, teaching sign readers the meaning of the special design elements and symbols on the signs. Both processes are critical to the long-term success of the program and should receive equal attention.

New Signs

The installation of all new recreational sign within the Tahoe area should conform with these guidelines in order to maintain consistency and uniformity. Ideally, these guidelines could form the basis for a streamlined permitting process which could allow installation of recreational sign that conforms to these guidelines in a timely fashion.

Existing Signs

There is a vast quantity of existing recreational sign within the Tahoe area. Clearly, replacement of all recreational signs Basin-wide for design considerations would not be realistic and would be very costly. Meeting the needs of any new uniform design will be better accomplished through the modification of existing signs, adding the unifying elements needed (i.e., logo elements, international symbols, etc.)

Initial efforts should be directed toward Facility ID/Welcome signs because of their prominence and direct association with public recreation facilities. The meaning of the logo elements will become apparent to the public as they are repeated on these signs throughout the Basin.

Information Kiosks and Collateral Materials

In addition to learning by example, the public can be educated to recognize and read new recreation signs. The first opportunity to communicate with visitors is typically at a visitor center or information kiosk. The elements of these guidelines (logo, pictograms, road markers, etc.) can be introduced easily through handout or explanatory message boards.

RECOMMENDATIONS FOR ASSESSMENT AND REFINEMENT

The key to long-term success of any project of this scale is assessment and refinement. Sign needs and message perceptions tend to change over time and if the sign design elements do not respond, the sign program will become inadequate. Visitor surveys to gather opinions regarding usefulness, feeling of uniformity, and clarity of information are critical to future sign projects within the Tahoe area. Refinement of graphics and text as time progresses is an integral part of any successful sign program and should be a part of the long-term implementation program for these guidelines.

INITIAL APPLICATION

Since there is such a range of recreational opportunities at Tahoe, a manageable focus had to be defined for the initial set of these guidelines. The greatest need seemed to be directing the public from the major roads that circle the Lake (US 50, State Route 89, and State Route 28) to lake access sites. This was perceived as the area where the greatest number of first-time or non-English speaking visitors might be able to see the Lake but would be unable to find their way to public access facilities, except those which are very obvious from the road. This included a reasonably wide range of sign types (e.g., advance notice, facility identification, etc.) and two major audiences, those in vehicles and bicyclists/pedestrians. However, this should be acknowledged as only a starting point. Eventually these guidelines should be expanded to include other locations and facilities away from the Lake in order to provide uniform signs for all public recreational facilities at Tahoe. This may involve development of additional sign types specific to the needs of the facility and/or audience for which the sign is designed. When new sign designs are established, they should be added to these Guidelines.

APPENDIX G

Approved TRPA Range of Earthtone Colors

Appendix G

APPROVED TRPA RANGE OF EARTHTONE COLORS

The TRPA approved earthtone colors are based on the Munsell Color System. The colors in the Munsell system are arranged by three dimensions that combine to describe all colors and are known in the Munsell system as Hue, Value and Chroma.

The hue notation of a color indicates its relation to red, yellow, green, blue, and purple; the value notation indicates its lightness; and the chroma notation indicates its strength (or departure from a neutral of the same lightness). The TRPA approved color ranges are based on colors in the Munsell system that approximate soils and plant tissue colors.

The Munsell notation for color consists of separate notations for hue, value, and chroma, which are combined in that order to form the color designation. The symbol for hue is the letter abbreviation of the color of the rainbow (R for red, YR for Yellow-Red, Y for Yellow) preceded by numbers from 0 to 10. Within each letter range, the hue becomes more yellow and less red as the numbers increase.

The notation for value consists of numbers from 0, for absolute black, to 10 for absolute white. Thus a color of value 5/ is visually midway between absolute white and absolute black.

The notation for chroma consists of numbers beginning at 0 for neutral grays, and increases at equal intervals to a maximum of about 20. For absolute achromatic colors (pure grays, white, and black), which have 0 chroma and no hue, the letter N (neutral) takes the place of a hue designation.

In writing the Munsell notation, the order is hue, value, and chroma with a space between the hue letter and the succeeding value number, and a diagonal between the two numbers for value and chroma. Thus, the notation for a color of hue 5YR (yellow-red), value 5, chroma 6 is "5YR 5/6". The approved earthtone color ranges based on the Munsell system are provided below categorized by hue and indicated by a black dot.

HUE 10R (Red)

VALUE	8/	white	pinking white	pink				
	7/	light gray						
	6/					light red		
	5/	reddish gray	pale red					
	4/	•	•	•	•			
	3/	•	•	•	•			
	2.5/	•	•	•	•			
		reddish black	very dusky red			dark red		
		/1	/2	/3	/4	/5	/6	/7 /8
CHROMA								

HUE 2.5YR (Yellow-Red)

VALUE	8/	white	pinking white	pink				
	7/	light reddish gray			light red			
	6/	<div>●</div> reddish gray						
	5/	<div>●</div>	<div>●</div> weak red	<div>●</div> reddish brown <div>●</div>	<div>●</div> <div>●</div>			
	4/	<div>●</div> dark reddish gray	<div>●</div>	<div>●</div> <div>●</div>	<div>●</div> red <div>●</div> <div>●</div> <div>●</div> <div>●</div>			
	3/	<div>●</div>	<div>●</div> dusky red	<div>●</div> dark reddish brown <div>●</div>	<div>●</div> dark red <div>●</div> <div>●</div> <div>●</div> <div>●</div>			
	2.5/	<div>●</div> reddish black	<div>●</div> very dusky red	<div>●</div> <div>●</div>				
		/1	/2	/3	/4	/5	/6	/7
CHROMA								

HUE 5YR (Yellow-Red)

VALUE	8/ 7/ 6/ 5/ 4/ 3/ 2.5/	white	pinkish white	pink		reddish yellow			
	light gray								
	● gray	pinkish gray	light reddish brown						
	●	reddish gray	● reddish brown	●	●				
	● dark gray	● dark reddish gray	●	●	●	● yellow red	●	●	
	● very dark gray	●	dark reddish brown		●	●			
	● black	●	●	●	●	●			
		/1	/2	/3	/4	/5	/6	/7	/8
CHROMA									

HUE 7.5YR (Yellow-Red)

VALUE	8/	white	pinkish white	pink		reddish yellow				
	7/	light gray								
	6/	● gray	● pinkish gray	● light brown	●					
	5/	●	● brown			●	●			
	4/	● dark gray	●	●	●	●	● strong brown			●
	3/	● very dark gray	●	● dark brown	●	●	●			
	2.5/	● black	●	● very dark brown	●					
		/1	/2	/3	/4	/5	/6			/7
CHROMA										

HUE 10YR (Yellow-Red)

VALUE	8/	white	very pale brown		yellow				
	7/	light gray							
	6/	<div>●</div> <div>gray</div>	<div>●</div> <div>light brownish gray</div>	<div>●</div> <div>pale brown</div>	<div>●</div> <div>light yellowish brown</div>	<div>brownish yellow</div>			
	5/	<div>●</div>	<div>●</div> <div>grayish brown</div>	<div>●</div> <div>brown</div>	<div>●</div> <div>yellowish brown</div>	<div>●</div>	<div>●</div>		
	4/	<div>●</div> <div>dark gray</div>	<div>●</div> <div>dark grayish brown</div>	<div>●</div>	<div>●</div> <div>dark yellowish brown</div>	<div>●</div>	<div>●</div>	<div>●</div> <div></div>	
	3/	<div>●</div> <div>very dark gray</div>	<div>●</div> <div>very dark grayish brown</div>	<div>●</div> <div>dark brown</div>	<div>●</div>	<div>●</div>	<div>●</div>		
	2.5/	<div>●</div> <div>black</div>	<div>●</div> <div>very dark brown</div>						
		/1	/2	/3	/4	/5	/6	/7	/8
CHROMA									

HUE 2.5Y (Yellow)

VALUE	8/	white	pale yellow				yellow		
	7/	light gray							
	6/	<div>●</div> <div>gray</div>	<div>●</div> <div>light brownish gray</div>	<div>●</div> <div>light yellowish brown</div>			<div>●</div> <div>olive yellow</div>		
	5/	<div>●</div>	<div>●</div> <div>grayish brown</div>	<div>●</div> <div>light olive brown</div>	<div>●</div>				
	4/	<div>●</div> <div>dark gray</div>	<div>●</div> <div>dark grayish brown</div>	<div>●</div> <div>olive brown</div>	<div>●</div>	<div>●</div>	<div>●</div>		
	3/	<div>●</div> <div>very dark gray</div>	<div>●</div> <div>very dark grayish brown</div>	<div>●</div> <div>dark olive brown</div>	<div>●</div>				
	2.5/	<div>●</div> <div>black</div>							
		/1	/2	/3	/4	/5	/6	/7	/8
CHROMA									

HUE 5Y (Yellow)

VALUE	8/	white	pale yellow			yellow		
	7/	light gray						
	6/	gray ●	light olive gray ●	pale oliave		olive yellow		
	5/		olive gray ●	oilve ●	●			
	4/	dark gray ●	●	●	●			
	3/	very dark gray ●	dark olive gray ●	●	●			
	2.5/	black ●		●				
	/1	/2	/3	/4	/5	/6	/7	/8
CHROMA								

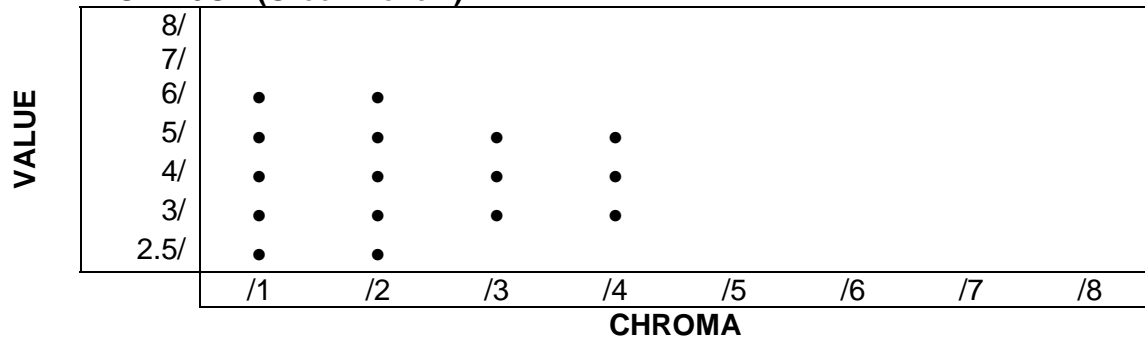
HUE 7.5Y (Yellow)

VALUE	8/							
	7/							
	6/	•						
	5/	•	•					
	4/	•	•	•	•			
	3/	•	•	•	•			
	2/	•	•					
	/1	/2	/3	/4	/5	/6	/7	/8
CHROMA								

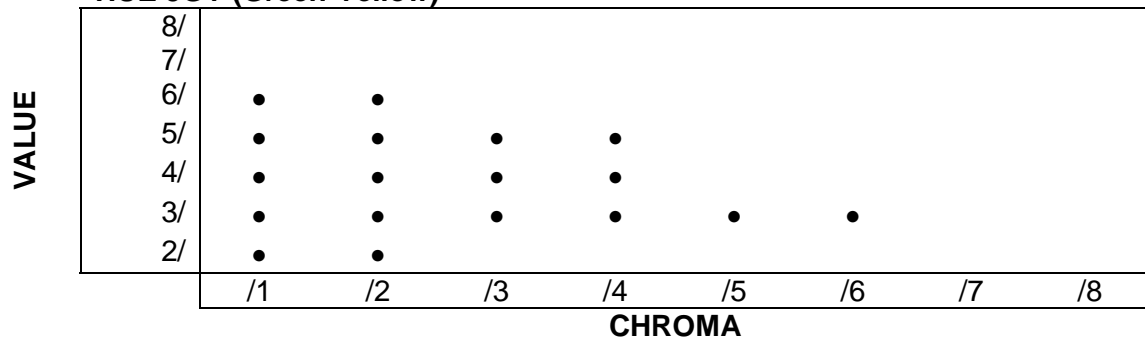
HUE 10Y (Yellow)

VALUE	8/								
	7/								
	6/								
	5/	•	•	•	•				
	4/	•	•	•	•				
	3/	•	•	•	•				
	2/	•	•						
	/1	/2	/3	/4	/5	/6	/7	/8	
CHROMA									

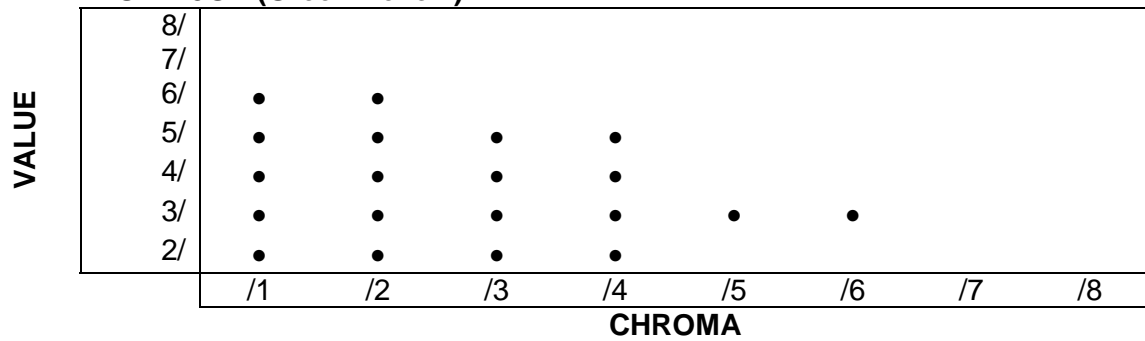
HUE 2.5GY (Green-Yellow)



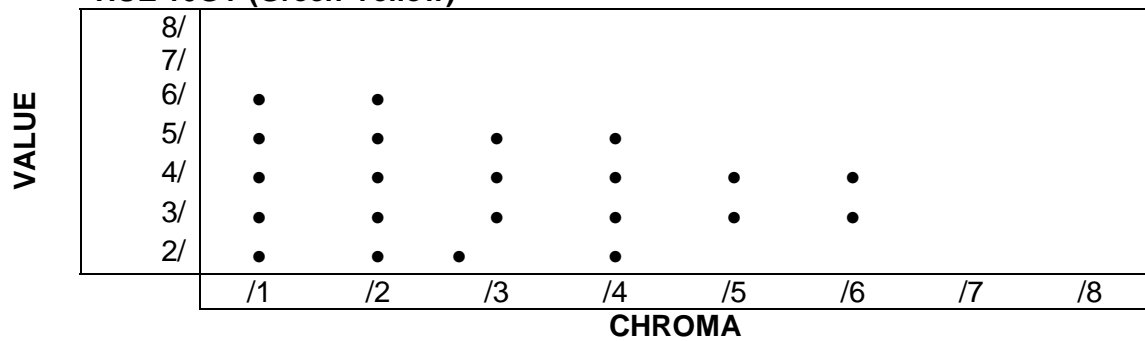
HUE 5GY (Green-Yellow)



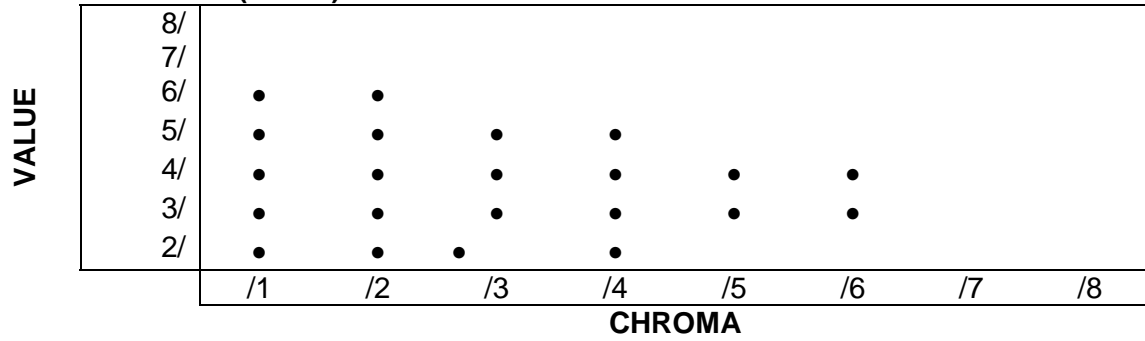
HUE 7.5GY (Green-Yellow)



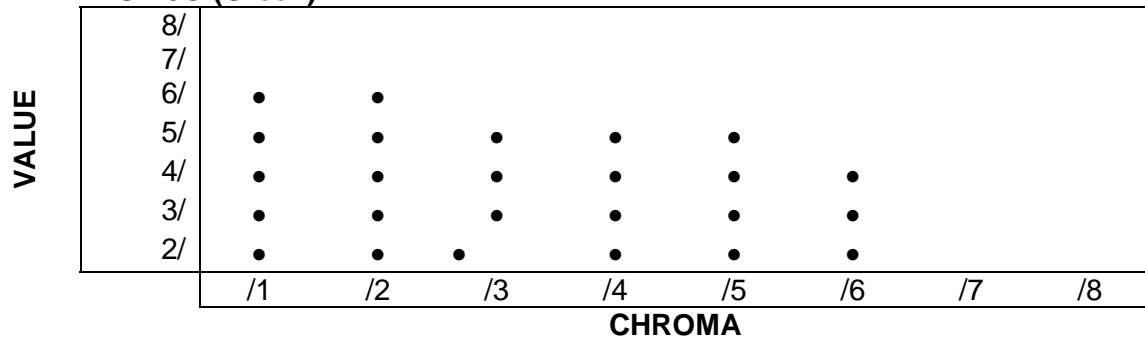
HUE 10GY (Green-Yellow)



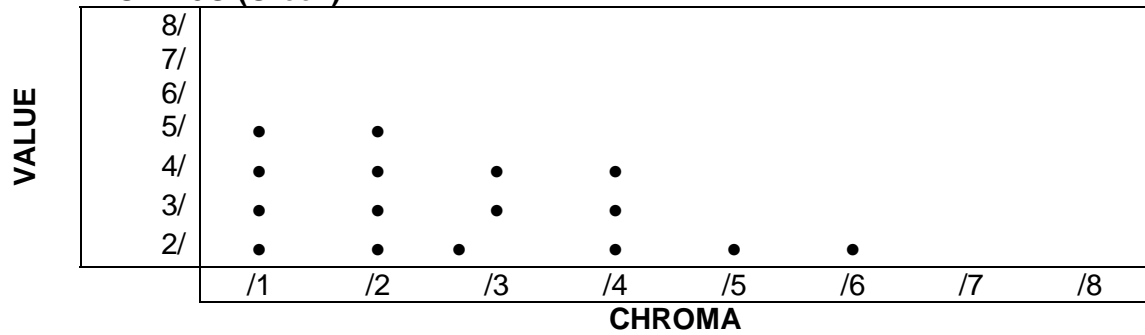
HUE 2.5G (Green)



HUE 5G (Green)



HUE 7.5G (Green)



HUE 10G (Green)

VALUE	8/								
	7/								
	6/								
	5/	•	•						
	4/	•	•	•	•				
	3/	•	•	•	•				
	2/	•	•	•	•	•	•		
		/1	/2	/3	/4	/5	/6	/7	/8
CHROMA									

GLEY 1

VALUE	8/	white	light greenish gray				pale green
	7/	light gray					
	6/	• gray	•	• greenish gray	•	•	•
	5/	•	•	•	•	•	•
	4/	• dark gray	•	• dark greenish gray	•	•	•
	3/	• very dark gray	•	•	•	•	•
	2.5/	• black	•	• greenish black	•	•	•
		N	10Y	5GY	10GY	5G	5G
CHROMA							

GLEY 2

VALUE	8/	light greenish gray			light bluish gray		
	7/						
	6/	•	• greenish gray	•	•	•	•
	5/	•	•	•	•	• bluish gray	•
	4/	•	• dark greenish gray	•	•	•	•
	3/	•	•	•	•	• dark bluish gray	•
	2.5/	• black	• greenish black	•	•	• bluish black	•
		10G	5BG	10BG	5B	10B	5PB
CHROMA							

APPENDIX H

Visual Assessment Tool for the Review of Projects Located Within the Shoreland

Appendix H

VISUAL ASSESSMENT TOOL FOR THE REVIEW OF PROJECTS LOCATED WITHIN THE SHORELAND

VISUAL MAGNITUDE/CONTRAST RATING PROCEDURAL STEPS

1. Determine the square footage of differing surfaces (i.e., roof, windows, shingle, stone) by direct measurement of the building(s)/structure(s) on the project area from elevation views.
2. Determine the percentage of each differing surface in relation to the overall square footage of the façade facing the lake.
3. Utilize the Color Matrix below to determine the rating for each differing surface except glass, which is rated in step 4. Use the percentage of each differing surface and multiply by the appropriate rating. Sum the results, this is your Color Score. For unique site conditions where the dominant color in the background is gray or green, the Brown to Black category may be used for scoring.[§]

Color Matrix[§]	Light/Gloss (Munsell Color Value 7+)	Med. Light (Munsell Color Value 6)	Medium (Munsell Color Value 5)	Med. Dark (Munsell Color Value 4)	Dark/Flat (Munsell Color Value 0-3)
White to Light Gray	1	2	3	4	5
Yellow	2	3	5	6	8
Red	3	5	6	8	10
Blue	4	6	8	10	12
Gray	5	7	9	12	15
Green	6	8	11	13	16
Brown to Black	8	10	12	15	17

4. Utilize the Glass Matrix below to determine the rating for all glass surfaces facing the lake. Determine the Visible Light Reflectance/Reflection value provided by the glass manufacturer and determine the appropriate rating. Multiply the rating and the percentage of glass facing the lake derived in Step 2 above. This is your Glass Score.[§]

[§] Amended 3/24/04

Glass Matrix[§]	
Visible Light Reflectance/Reflection (%)	Rating
> 15	1
>13 – 15	2
>11 – 13	3
>9 - 11	4
>7 – 9	5
> 5 – 7	6
> 3 – 5	7
0-3	8

- Determine the number of plane surfaces visible. The visible plane column will be used in Step 6 to determine the appropriate rating. See Figure 2 for graphic examples.
- Determine the appropriate surface pattern for each differing surface determined in Step 1. Using the Surface Plan & Texture Matrix below and the appropriate visible plane column from Step 5, assign an appropriate rating and multiply it to the percentage of each differing surface derived from Step 2[§]. Sum the results, this is your Surface Plan/Texture Score.

Surface Plane & Texture Matrix		Number Planes				
		1 Plane	2 Plane	3-4 Planes	5-6 Planes	7 or more Planes
Surface Pattern	Surface Plane with no Texture	1	2	3	4	5
	Surface Plane with Minimal Texture	2	3	4	5	6
	Surface Plane with Moderate Texture	3	4	5	6	7
	Surface Plane with Heavy Texture	4	5	6	7	8
No Texture: Metal roofing, glass [§] , Minimal Texture Stucco walls, plywood, and corten steel. Moderate Texture: Shiplap siding, heavy v-joint siding, wood shingle roofs. Heavy Texture: Rock masonry, logs, boards and batten, composite shingle, shake roofing.						

[§] Amended 3/24/04

7. From the critical viewing point 300 feet offshore, estimate the percent of the building(s)/structure(s) perimeter¹ that is visible. Then determine the rating on the Perimeter Matrix below. See Figure 1 for graphic examples. This rating is your Perimeter Score.

Perimeter Matrix	Percent of Perimeters of Structure Visible									
	0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
Rating	10	9	8	7	6	5	4	3	2	1

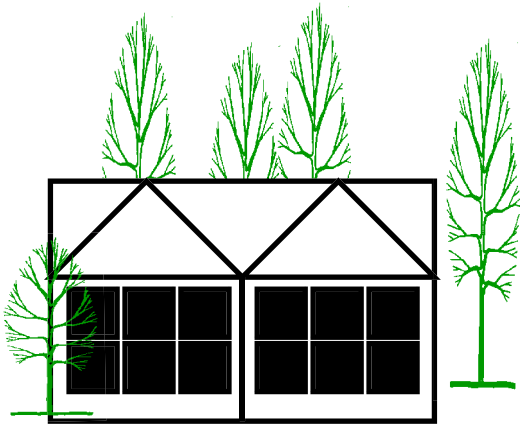
8. Add the four scores (Color Score, Glass Score, Perimeter Score, and Surface/Texture Score). This is the CONTRAST RATING.[§]
9. Using THE VISUAL MAGNITUDE/CONTRAST RATING TABLE, move down the Contrast Rating Column until you reach the Contrast Rating determined in Step 7.
10. Follow that row to the right to the VISIBLE SQUARE FOOTAGE ALLOWED. This is the allowed visible square footage allowed for the proposed project.

¹ Perimeter refers to the edges of the building(s)/structure(s) and not to the visible mass or square footage facing the lake. This is a linear measurement not an area measurement.

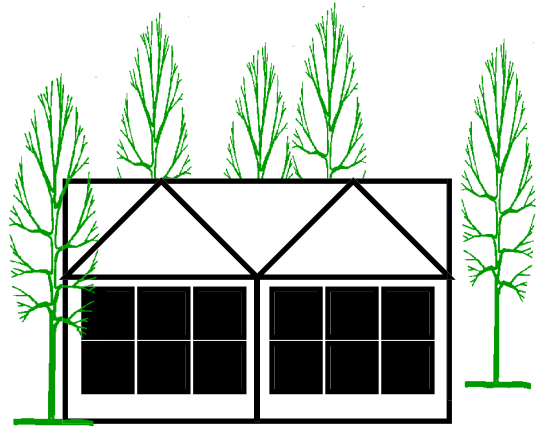
[§] Amended 3/24/04

Visual Magnitude/Contrast Rating Table for Parcels with Lake Footage of 100' or less	
Contrast Rating	Visible Square Footage Allowed
3	55
4	63
5	73
6	84
7	97
8	110
9	120
10	150
11	170
12	195
13	225
14	260
15	295
16	340
17	390
18	450
19	515
20	595
21	680
22	785
23	900
24	1035
25	1190
26	1365
27	1565
28	1800
29	2000
30	2200
31	2400
32	2600
33	2800
34	3050
35	3300

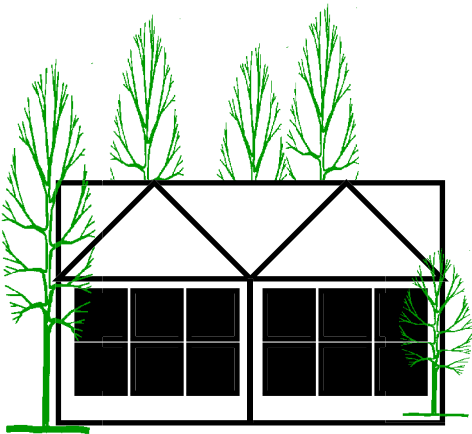
FIGURE 1: PERIMETER OF STRUCTURE VISIBLE



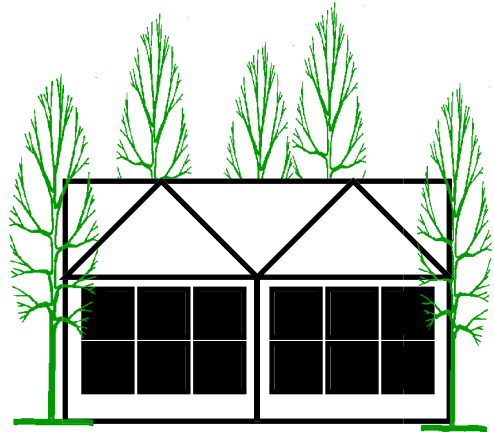
90-100%



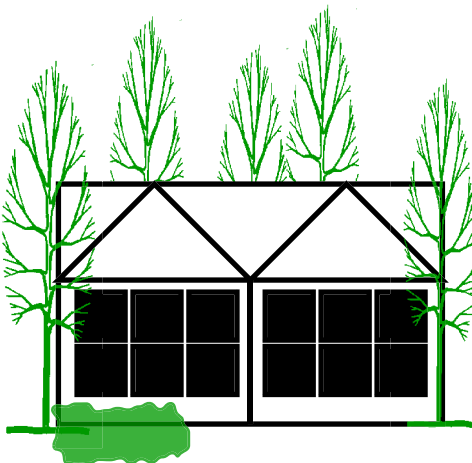
80-90%



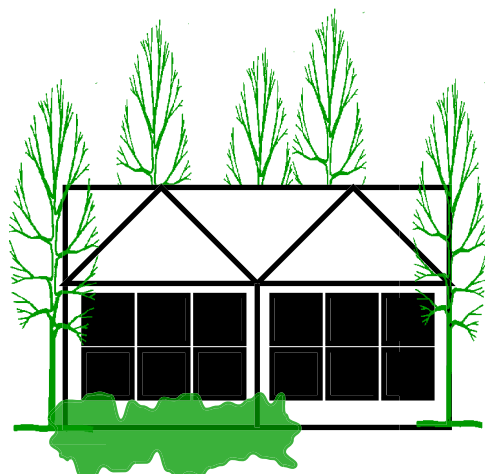
70-80%



60-70%

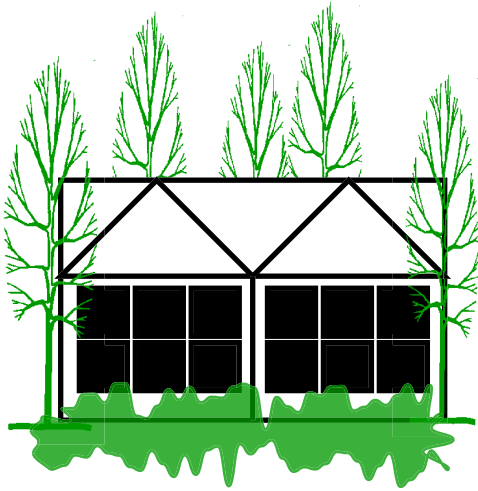


50-60%

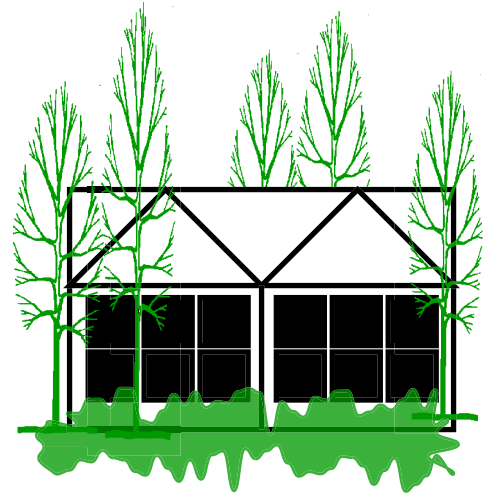


40-50%

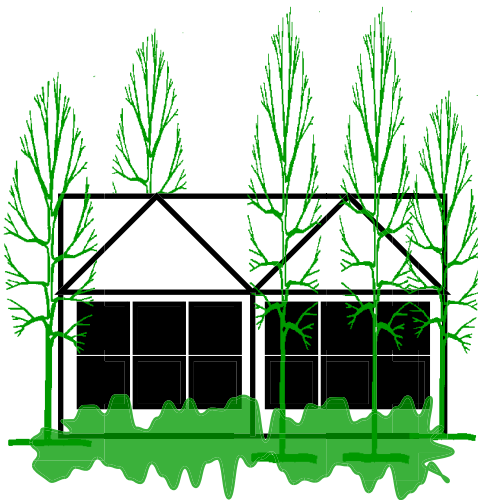
FIGURE 1: PERIMETER OF STRUCTURE VISIBLE



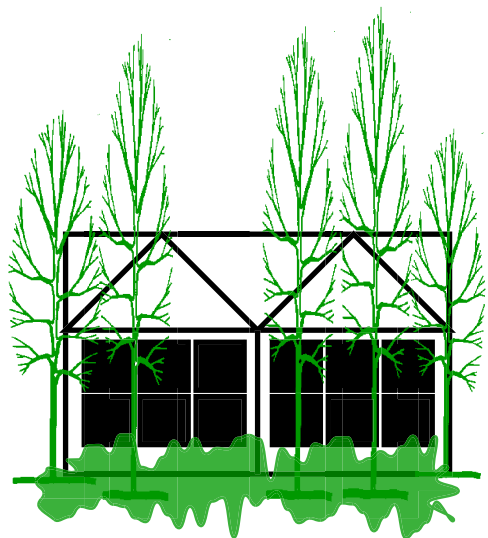
30-40%



20-30%

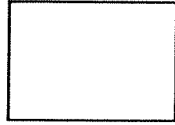


10-20%



10%

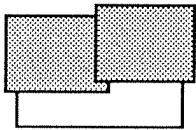
FIGURE 2: NUMBER OF VISIBLE PLANE SURFACES



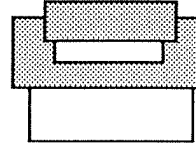
1 Plane Surface



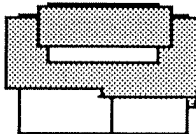
2 Plane Surfaces



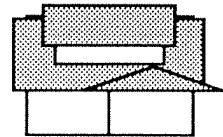
3 Plane Surfaces



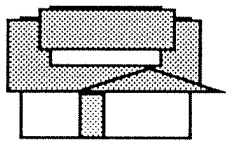
4 Plane Surfaces



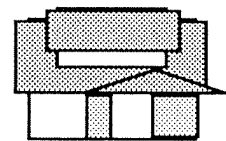
5 Plane Surfaces



6 Plane Surfaces



7 Plane Surfaces



8 Plane Surfaces

